



FIG. 1A	FIG. 1B	FIG. 1C	FIG. 1D	FIG. 1E	FIG. 1F	FIG. 1G	FIG. 1H	FIG. 1I	FIG. 1J	FIG. 1K	FIG. 1L	FIG. 1M	FIG. 1N	FIG. 1O	FIG. 1P	FIG. 1Q	FIG. 1R	FIG. 1S	FIG. 1T	FIG. 1U	FIG. 1V	FIG. 1W	FIG. 1X	FIG. 1Y	FIG. 1Z	FIG. 1AA	FIG. 1AB	FIG. 1AC	FIG. 1AD	FIG. 1AE	FIG. 1AF	FIG. 1AG	FIG. 1AH	FIG. 1AI	FIG. 1AJ	FIG. 1AK	FIG. 1AL	FIG. 1AM	FIG. 1AN
FIG. 1A	FIG. 1B	FIG. 1C	FIG. 1D	FIG. 1E	FIG. 1F	FIG. 1G	FIG. 1H	FIG. 1I	FIG. 1J	FIG. 1K	FIG. 1L	FIG. 1M	FIG. 1N	FIG. 1O	FIG. 1P	FIG. 1Q	FIG. 1R	FIG. 1S	FIG. 1T	FIG. 1U	FIG. 1V	FIG. 1W	FIG. 1X	FIG. 1Y	FIG. 1Z	FIG. 1AA	FIG. 1AB	FIG. 1AC	FIG. 1AD	FIG. 1AE	FIG. 1AF	FIG. 1AG	FIG. 1AH	FIG. 1AI	FIG. 1AJ	FIG. 1AK	FIG. 1AL	FIG. 1AM	FIG. 1AN
FIG. 1A	FIG. 1B	FIG. 1C	FIG. 1D	FIG. 1E	FIG. 1F	FIG. 1G	FIG. 1H	FIG. 1I	FIG. 1J	FIG. 1K	FIG. 1L	FIG. 1M	FIG. 1N	FIG. 1O	FIG. 1P	FIG. 1Q	FIG. 1R	FIG. 1S	FIG. 1T	FIG. 1U	FIG. 1V	FIG. 1W	FIG. 1X	FIG. 1Y	FIG. 1Z	FIG. 1AA	FIG. 1AB	FIG. 1AC	FIG. 1AD	FIG. 1AE	FIG. 1AF	FIG. 1AG	FIG. 1AH	FIG. 1AI	FIG. 1AJ	FIG. 1AK	FIG. 1AL	FIG. 1AM	FIG. 1AN
FIG. 1A	FIG. 1B	FIG. 1C	FIG. 1D	FIG. 1E	FIG. 1F	FIG. 1G	FIG. 1H	FIG. 1I	FIG. 1J	FIG. 1K	FIG. 1L	FIG. 1M	FIG. 1N	FIG. 1O	FIG. 1P	FIG. 1Q	FIG. 1R	FIG. 1S	FIG. 1T	FIG. 1U	FIG. 1V	FIG. 1W	FIG. 1X	FIG. 1Y	FIG. 1Z	FIG. 1AA	FIG. 1AB	FIG. 1AC	FIG. 1AD	FIG. 1AE	FIG. 1AF	FIG. 1AG	FIG. 1AH	FIG. 1AI	FIG. 1AJ	FIG. 1AK	FIG. 1AL	FIG. 1AM	FIG. 1AN

FIG. 1



GCTCAGGCAGC AGGTCGGGGC CGCAGCCCCA TCCAGCCCCC GCCCCCATG CGTCCGGGG 60
GCCCGCCCTG AGCTGGGGCC TCCGGGGCC GGGGGCCTG GGACGGGGG GCCCATGGGC 120
GCCCTGCCCT AACG ATG CCG CCC GCC GCG CCC GCC CGC CTG GCG CTC GCG 170
Met Pro Pro Ala Ala Pro Ala Arg Leu Ala Leu Ala Leu Ala
1 5 10
CTG GGC CTG GGC CTG TGG CTC GGG GCG CTG GCG GGG CCC GGG CCC GGC 218
Leu Gly Leu Gly Leu Trp Leu Gly Ala Leu Gly Gly Pro Gly Arg
15 20 25
GGC TGC GGG CCC TGC GAG CCC TCC CTC TGC GGC CCA GCG CCC GGC 266
Gly Cys Gly Pro Cys Glu Pro Pro Cys Leu Cys Gly Pro Ala Pro Gly
30 35 40
GCC GCC TGC CGC GTC AAC TGC TCG GGC CGC GGG CTG CGG ACG CTC GGT 314
Ala Ala Cys Arg Val Asn Cys Ser Gly Arg Gly Leu Arg Thr Leu Gly
45 50 55 60
CCC GCG CTG CGC ATC CCC GCG GAC GCC ACA GCG CTA GAC GTC TCC CAC 362
Pro Ala Leu Arg Ile Pro Ala Asp Ala Thr Ala Leu Asp Val Ser His
65 70 75
AAC CTC CTC CGG CGG CTG GAC GTT GGG CTC CTC GCG AAC CTC TCG GCG 410
Asn Leu Leu Arg Ala Leu Asp Val Gly Leu Leu Ala Asn Leu Ser Ala
80 85 90



CTG GCA GAG CTG GAT ATA AGC AAC AAC AAG ATT TCT ACG TTA GAA GAA
Leu Ala Glu Leu Asp Ile Ser Asn Asn Lys Ile Ser Thr Leu Glu Glu
95 100 105

GGA ATA TTT GCT AAT TTA TTT AAT TTA AGT GAA ATA AAC CTC ACT GGG
Gly Ile Phe Ala Asn Leu Phe Asn Leu Ser Gly Ile Asn Leu Ser Gly
110 115 120

AAC CCG TTT GAG TGT CAC TGT GGC CTG GCG TGG CTG CCG CGA TGG GCG
Asn Pro Phe Glu Cys Asp Cys Glu Leu Ala Trp Leu Pro Arg Trp Ala
125 130 135 140

GAG GAG CAG CAG GTG CGG GTG CAG CCC GAG GCA GCC ACG TGT GCT
Glu Glu Glu Glu Val Arg Val Val Glu Pro Glu Ala Ala Thr Cys Ala
145 150 155

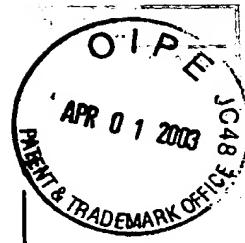
GGG CCT GGC TCC CTG GCT GGC CAG CCT CTG CTT GGC ATC CCC TTG CTG
Gly Pro Gly Ser Leu Ala Gly Glu Pro Leu Leu Gly Ile Pro Leu Leu
160 165 170

GAC AGT GGC TGT GGT GAG GAG TAT GTC GCC TGC CTC CCT GAC AAC AGC
Asp Ser Gly Cys Glu Glu Tyr Val Ala Cys Leu Pro Asp Asn Ser
175 180 185

TCA GGC ACC GTG GCA GCA GTG TCC TTT TCA GCT GCC CAC GAA GGC CTG
Ser Gly Thr Val Ala Ala Val Ser Phe Ser Ala Ala His Glu Gly Leu
190 195 200

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FIG. 1B



CTT CAG CCA GAG GCC TGC AGC GCC TTC TGC TTC TCC ACC GGC CAG GGC
 Leu Gin Pro Glu Ala Cys Ser Ala Phe Cys 794
 205 210 215 220

CTC GCA GCC CTC TCG GAG CAG GCC TGG TGC CTC TCC TGG GCG CCC CAG
 Leu Ala Ala Leu Ser Glu Gin Gly Trp Cys Leu Cys Glu Ala Ala Gin 842
 225 230 235 240

CCC TCC AGT GCC TCC TTT GCC TGC CTG TCC CTC TCC TGG GCG CCC CCG
 Pro Ser Ser Ala Ser Phe Ala Cys Leu Ser Leu Cys Ser Glu Ala Pro Pro 890
 245 250 255

CCA CCT CCT GCC CCC ACC TGT AGG GGC CCC ACC CTC CTC CAG CAC GTC
 Pro Pro Pro Ala Pro Thr Cys Arg Gly Pro Thr Leu Leu Gin His Val 938
 260 265 270

TTC CCT GCC TCC CCA GGG GCC ACC CTG GTG GGG CCC CAC GGA CCT CTG
 Phe Pro Ala Ser Pro Gly Ala Thr Leu Val Val Gly Pro His Glu Pro Leu 986
 275 280 285

GCC TCT GGC CAG CTA GCA GCC TTC CAC ATC GCT GCC CCG CTC CCT GTC
 Ala Ser Gly Gin Leu Ala Ala Phe His Ile Ala Ala Pro Leu Pro Val 1034
 290 295 300

ACT GCC ACA CGC TGG GAC TTC GGA GAC GGC TCC GCC GAG GTG GAT GCC
 Thr Ala Thr Arg Trp Asp Phe Gly Asp Gly Ser Ala Glu Val Asp Ala 1082
 305 310

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FIG. 1C

GCT GGG CCG GCT GCC TCG CAT CGC TAT GTG CTG CCT GGG CGC TAT CAC
Ala Gly Pro Ala Ala Ser His Arg Tyr Val Leu Pro Gly Arg Tyr His
320 325 330

GTG ACG GCC GTG CTG GCC CTG GGG GGC TCA GCC CTG CTG GGG ACA
Val Thr Ala Val Leu Ala Leu Gly Ala Gly Ser Ala Leu Gly Thr
335 340 345

GAC GTG CAG GTG GAA GCG GCA CCT GCC CCC CTG GAG CTC GTC TGC CGC
Asp Val Gln Val Glu Ala Ala Pro Ala Leu Glu Leu Val Cys Pro
350 355 360

TCC TCG CTG CAG AGT GAC GAG AGC CTC GAC CTC AGC ATC CAG AAC CGC
Ser Ser Val Gln Ser Asp Glu Ser Leu Asp Leu Ser Ile Gln Asn Arg
365 370 375 380

GGT GGT TCA GGC CTG GAG GCC GCC TAC AGC ATC GTG GCC CTG GGC GAC
Gly Gly Ser Gly Leu Glu Ala Ala Tyr Ser Ile Val Ala Leu Gly Glu
385 390 395

GAG CCC CGG CGA CGG GTG CAC CGC CTC TGC CCC TCG GAC ACG GAG ATC
Glu Pro Ala Arg Ala Val His Pro Leu Cys Pro Ser Asp Thr Glu Ile
400 405 410

TTC CCT GGC AAC GGG CAC TGC TAC CGC CTG GTG GAG AAG GCG GCC
Phe Pro Gly Asn Gly His Cys Tyr Arg Leu Val Glu Lys Ala Ala
415 420 425



TGG CTG CAG GCG CAG GAG CAG TGT CAG GCC TGG GCC TGG GGG GCC GCC CTG 1466
Trp Leu Gin Ala Gin Glu Gin Cys Gin Ala Trp Ala Gly Ala Ala Leu
430 435 440

GCA ATG GTG GAC AGT CCC GCC GTG CAG CGC TTC CTC GTC TCC CCC GTC 1514
Ala Met Val Asp Ser Pro Ala Val Gin Arg Phe Leu Val Ser Arg Val
445 450 455

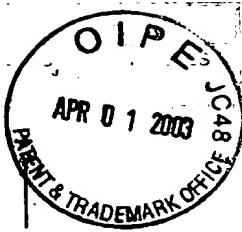
ACC AGG TGC CTA GAC GTG TGG ATC GGC TTC TCG ACT GTG CAG GGG GTG 1562
Thr Arg Cys Leu Asp Val Trp Ile Gly Phe Ser Thr Val Gin Gly Val
465 470 475

GAG GTG GGC CCA GCG CCG CAG GGC GAG GCC TTC AGC CTG GAG AGC TGC 1610
Glu Val Gly Pro Ala Pro Glu Gly Ala Phe Ser Leu Glu Ser Cys
480 485 490

CAG AAC TGG CTG CCC GGG GAG CCA CAC CCA GCC ACA GCA GAG CAC TGC 1658
Gln Asn Trp Leu Pro Gly Glu Pro His Pro Ala Thr Ala Glu His Cys
495 500 505

GTC CGG CTC GGG CCC ACC GGG TGG TGT AAC ACC GAC CTC TGC TCA GCG 1706
Val Arg Leu Gly Pro Thr Gly Trp Cys Asn Thr Asp Leu Cys Ser Ala
510 515 520

CCG CAC ACC TAC GTC TGC GAG CTC CAG CCC GGA GGC CCA GTG CAG GAT 1754
Pro His Ser Tyr Val Cys Glu Leu Gin Pro Gly Gly Pro Val Gin Asp
525 530 535



GCC GAG AAC CTC CTC GTG GGA CCC AGT GGG GAC CTC CAG GGA CCC
Ala Glu Asn Leu Leu Val Glu Ala Pro Ser Glu Asp Leu Glu Glu Pro
545 550 555

CTG ACG CCT CTG GCA CAG CAG GAC GGC CTC TCA GCC CCC CAC GAG CCC
Leu Thr Pro Leu Ala Glu Glu Asp Glu Leu Ser Ala Pro His Glu Pro
560 565 570

GTG GAG GTC ATG GTA TTC CCG GGC CTG CGT CTG ACC CGT GAA GCC CCC TTC
Val Glu Val Met Val Phe Pro Glu Leu Arg Leu Ser Arg Glu Ala Phe
575 580 585

CTC ACC ACG GCC GAA TTT GGG ACC CAG GAG CTC CGG CGG CCC GCC CAG
Leu Thr Thr Ala Glu Phe Glu Thr Glu Glu Leu Arg Arg Pro Ala Glu
590 595 600

CTG CGG CTG CAG GTG TAC CGG CTC CTC AGC ACA GCA GGG ACC CCG GAG
Leu Arg Leu Glu Val Tyr Arg Leu Leu Ser Thr Ala Glu Thr Pro Glu
605 610 615 620

AAC GGC AGC GAG CCT GAG ACC AGG TCC CCG GAC AAC ACC CAG CTG
Asn Glu Ser Glu Pro Glu Ser Arg Ser Pro Asp Asn Arg Thr Glu Leu
625 630 635

GCC CCC CGG TGC ATG CCA GGG GGA CGC TGG CCT GGA GCC AAC ATC
Ala Pro Ala Cys Met Pro Glu Glu Arg Trp Cys Pro Glu Ala Asn Ile
640 645 650

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FIG. 1F



TGC TTG CCG CTG GAC GCC TCC TGC CAC CCC CAG GCC TGC GCC AAT GGC 2138
Cys Leu Pro Leu Asp Ala Ser Cys His Pro Gin Ala Cys Ala Asn Gly
655 660 665

TGC ACG TCA GGG CCA GGG CTA CCC GGG GCC CCC TAT GCG CTA TGG ACA 2186
Cys Thr Ser Gly Pro Gly Leu Pro Gly Ala Pro Tyr Ala Leu Trp Arg
670 675 680

GAG TTC CTC TCC TCC GTT CCC GCG GGG CCC CCC GCG CAG TAC TCG TGC 2234
Glu Phe Leu Phe Ser Val Pro Ala Gly Pro Pro Ala Gin Tyr Ser Val
685 690 695 700

ACC CTC CAC GGC CAG GAT GTC CTC ATG CTC CCT GGT GAC CTC GTT GGC 2282
Thr Leu His Gly Gin Asp Val Leu Met Leu Pro Gly Asp Leu Val Gly
705 710 715

TTG CAG CAC GAC GCT GGC CCT GGC GCC CTC CTG CAC TGC TCG CCG GCT 2330
Leu Gin His Asp Ala Gly Pro Gly Ala Leu Leu His Cys Ser Pro Ala
720 725 730

CCC GGC CAC CCT GGT CCC CGG GCC CCG TAC CTC TCC GCC AAC GCC TCG 2378
Pro Gly His Pro Gly Pro Arg Ala Pro Tyr Leu Ser Ala Asn Ala Ser
735 740 745

TCA TGG CTG CCC CAC TTG CCA GCC CAG CTG GAG GGC ACT TGG GCC TGC 2426
Ser Trp Leu Pro His Leu Pro Ala Gin Leu Glu Gly Thr Trp Ala Cys
750 755 760

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FIG. 1G



CCT GCC TGT GCC CTC CGG CTT GCA GCC ACG GAA CAG CTC ACC GTG
Pro Ala Cys Ala Leu Arg Leu Ala Ala Thr Glu Gin Leu Thr Val
765 770 780

CTG CTG GCC TTG AGG CCC AAC CCT GGA CTG CGG CCT CCT GGC CGC TAT
Leu Leu Gly Leu Arg Pro Asn Pro Gly Leu Arg Leu Pro Gly Arg Tyr
785 790 795

GAG GTC CGG GCA GAG GTG GGC AAT GCC GTG TCC AGG CAC AAC CTC TCC
Glu Val Arg Ala Glu Val Gly Asn Gly Val Ser Arg His Asn Leu Ser
800 805 810

TGC AGC TTT GAC GTG GTC TCC CCA GTG GCT GGG CTG CGG GTC ATC TAC
Cys Ser Phe Asp Val Val Ser Pro Val Ala Gly Leu Arg Val Ile Tyr
815 820 825

CCT CCC CGC GAC GGC CGC CTC TAC GTG CCC ACC AAC GGC TCA GCC
Pro Ala Pro Arg Asp Gly Arg Leu Tyr Val Pro Thr Asn Gly Ser Ala
830 835 840

TTG GTG CTC CAG GTG GAC TCT GGT GCC AAC GCC ACG GCT CGC
Leu Val Leu Val Val Asp Ser Gly Ala Asn Ala Thr Ala Thr Ala Arg
845 850 855 860

TGG CCT CCC GGC AGT GTC AGC GCC CGC TTT GAG AAT GTC TGC CCT GCC
Trp Pro Gly Gly Ser Val Ser Ala Arg Phe Glu Asn Val Cys Pro Ala
865 870 875

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FIG. 1H



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CTG GTG GCC ACC TTC GTG CCC GGC TGC CCC TGG GAG ACC AAC GAT ACC 2810
Leu Val Ala Thr Phe Val Pro Glu Cys Pro Trp Glu Thr Asn Asp Thr
885 890 895

CTG TTC TCA GTG GTA GCA CTG CCG TGG CTC AGT GAG GGG GAG CAC GTG 2858
Leu Phe Ser Val Val Ala Leu Pro Trp Leu Ser Glu Glu His Val
900 905 910 915

GTG GAC GTG GTG GAA AAC AGC GCC AGC CGG CGC AAC CTC AGC ACC CTC 2906
Val Asp Val Val Val Glu Asn Ser Ala Ser Arg Ala Asn Leu Ser Leu
910 915 920

CGG GTG ACG GCG GAG CCC ATC TGT GGC CTC CGC GCC ACG CCC AGC 2954
Arg Val Thr Ala Glu Glu Pro Ile Cys Glu Leu Arg Ala Thr Pro Ser
925 930 935 940

CCC GAG GCC CGT GTA CTG CAG GGA GTC CTA GTG AGG TAC AGC CCC GTG 3002
Pro Glu Ala Arg Val Leu Glu Val Leu Val Arg Tyr Ser Pro Val
945 950 955

GTG GAG GCC TCG GAC ATG GTC TTC CGG TGG ACC ATC AAC GAC AAG 3050
Val Glu Ala Glu Ser Asp Met Val Phe Arg Trp Thr Ile Asn Asp Lys
960 965 970

CAG TCC CTG ACC TTC CAG AAC GTG GTC TTC AAT GTC ATT TAT CAG AGC 3098
Gln Ser Leu Thr Phe Gln Asn Val Phe Asn Val Ile Tyr Gln Ser
975 980 985

FIG. 11



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GGG GCG GTC TTC AAG CTC TCA CTC ACG GCC TCC AAC CAC GTG AGC AAC 3146
Ala Ala Val Phe Lys Leu Ser Leu Thr Ala Ser Asn His Val Ser Asn
990 995 1000

GTC ACC GTG AAC TAC AAC GTA ACC GTG GAG CGG ATG AAC AGG ATG CAG 3194
Val Thr Val Asn Tyr Asn Val Thr Val Glu Arg Met Asn Arg Met Gin
1005 1010 1015 1020

GGT CTG CAG GTC TCC ACA GTG CCG GCC GTG CTG TCC CCC AAT GCC ACG 3242
Gly Leu Gin Val Val Ser Thr Val Pro Ala Val Leu Ser Pro Asn Ala Thr
1025 1030 1035 1040

CTA GCA CTG ACG GCG GGC GTG CTG GAC TCG GCC GTG GAG GTG GCC 3290
Leu Ala Leu Thr Ala Gly Val Leu Val Asp Ser Ala Val Glu Val Ala
1040 1045 1050 1055

TTC CTG TGG ACC TTT GGG GAT GGG GAG CAG GCC CTC CAC CAG TTC CAG 3338
Phe Leu Trp Thr Phe Gly Asp Gly Glu Gin Ala Leu His Gin Phe Gin
1055 1060 1065 1070

CCT CCG TAC AAC GAG TCC TTC CCG GTT CCA GAC CCC TCC GTG GCC CAG 3386
Pro Pro Tyr Asn Glu Ser Phe Pro Val Pro Asp Pro Ser Val Ala Gin
1075 1080 1085 1090

GTG CTC GTG GAG CAC AAT GTC ATG CAC TAC GCT GCC CCA GGT GAG 3434
Val Leu Val His Asn Val Met His Thr Tyr Ala Ala Pro Gly Glu
1085 1090 1100

FIG. 1J



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TAC CTC ACC GTG CTG GCA TCT AAT GCC TTC GAG AAC CTC ACG CAG
Tyr Leu Leu Val Thr Val Ala Ser Asn Ala Phe Glu Asn Leu Thr Glu
1105 1110 1115

CAG GTG CCT GTG AGC GTG CGC GCC TCC CTG CCC TCC GTG GCT GTC GGT
Gln Val Pro Val Ser Val Arg Ala Ser Leu Pro Ser Val Ala Val Gly
1120 1125 1130

GTG AGT GAC GGC GTC CTG GTG GCC CGC CCC GTC ACC TTC TAC CCG
Val Ser Asp Gly Val Leu Val Ala Gly Arg Pro Val Thr Phe Tyr Pro
1135 1140 1145

CAC CCC CTG CCT TCG CCT GGG GGT CTT TAC ACG TGG GAC TTC GGG
His Pro Leu Pro Ser Pro Gly Gly Val Leu Tyr Thr Trp Asp Phe Gly
1150 1155 1160

GAC GCC CCT GTC CTG ACC CAG AGC CAG CCG GCT GCC AAC CAC ACC
Asp Gly Ser Pro Val Leu Thr Gin Ser Gin Pro Ala Ala Asn His Thr
1165 1170 1175 1180

TAT GCC TCG AGG GGC ACC TAC CAC GTG CGC CTG GAG GTC AAC AAC ACG
Tyr Ala Ser Arg Gly Thr Tyr His Val Arg Leu Glu Val Asn Asn Thr
1185 1190 1195

GTG AGC GGT GCG GCG CAG GCG GAT GTG CGC GTC TTT GAG GAG CTC
Val Ser Gly Ala Ala Ala Asp Val Arg Val Phe Glu Glu Leu
1200 1205 1210

FIG. 1K



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CGC GGA CTC AGC GTG GAC ATG AGC CTC GCC GTG GAG CAG GGC GCC CCC
Arg Gly Leu Ser Val Asp Met Ser Leu Ala Val Glu Gln Gly Ala Pro
1215 1220 1225

CTG GTC GTC AGC GCC GCG GTG CAG ACG GGC GAC AAC ATC ACG TGG ACC
Val Val Val Ser Ala Ala Val Gln Thr Gly Asp Asn Ile Thr Trp Thr
1230 1235 1240

TTC GAC ATG GGG GAC GGC ACC GTG CTC TCG GGC CCG GAG GCA ACA GTG
Phe Asp Met Gly Asp Gly Thr Val Leu Ser Gly Pro Glu Ala Thr Val
1245 1250 1255

GAG CAT GTG TAC CTG CGG GCA CAG AAC TGC ACA GTG ACC GTG GGT GCG
Glu His Val Tyr Leu Arg Ala Gln Asn Cys Thr Val Thr Val Gly Ala
1265 1270 1275

GCC AGC CCC GCC GGC CAC CTG GCC CGG AGC CTG CAC GTG CTG GTC TTC
Ala Ser Pro Ala Gly His Leu Ala Arg Ser Leu His Val Leu Val Phe
1280 1285 1290

GTC CTG GAG GTG CTG CGC GTT GAA CCC GCC TGC ATC CCC ACG CAG
Val Leu Glu Val Val Arg Val Glu Pro Ala Ala Cys Ile Pro Thr Gln
1295 1300 1305

CCT GAC CCC CGG CTC ACC GCC TAC GTC ACC GGG AAC CGG CCC CAC TAC
Pro Asp Ala Arg Leu Thr Ala Tyr Val Thr Gly Asn Pro Ala His Tyr
1310 1315 1320

FIG. 1L



CTC TTC GAC TGG ACC TTC GGG GAT GGC TCC TCC AAC ACG ACC GTG CGG 4154
Leu Phe Asp Trp Thr Phe Gly Asp Gly Ser Ser Asn Thr Thr Val Arg 1340
1325

GGG TGC CCG ACC GTG ACA CAC AAC TTC ACG CGG AGC GGC ACG TTC CCC 4202
Gly Cys Pro Thr Val Thr His Asn Phe Thr Arg Ser Gly Thr Phe Pro 1355
1345

CTG GCG CTG GTG CTG TCC AGC CGC GTG AAC AGG GCG CAT TAC TTC ACC 4250
Leu Ala Leu Val Leu Ser Ser Arg Val Asn Arg Ala His Tyr Phe Thr 1370
1360

AGC ATC TGC GTG GAG CCA GAG GTG GGC AAC GTC ACC CTG CAG CCA GAG 4298
Ser Ile Cys Val Glu Pro Glu Val Gly Asn Val Thr Leu Glu Pro Glu 1385
1375

AGG CAG TTT GTG CAG CTC GGG GAC GAG GCC TGG CTG GTG GCA TGT GCC 4346
Arg Gin Phe Val Gin Leu Glu Asp Glu Ala Trp Leu Val Ala Cys Ala 1400
1395

TGG CCC CCG TTC CCC TAC CGC TAC ACC TGG GAC TTT GGC ACC GAG GAA 4394
Trp Pro Pro Phe Pro Tyr Arg Tyr Thr Trp Asp Phe Gly Thr Glu Glu 1420
1415

GCC CCC CCC TCC CGT GCC AGG GGC CCT GAG GTG ACC TTC ATC TAC CGA 4442
Ala Ala Ala Pro Thr Arg Ala Arg Gly Pro Glu Val Thr Phe Ile Tyr Arg 1435
1425

FIG. 1M



GAC CCA GGC TCC TAT CTT GTG ACA GTC ACC GCG TCC AAC AAC ATC TCT 4490
Asp Pro Gly Ser Tyr Leu Val Thr Val Thr Ala Ser Asn Asn Ile Ser
1440 1445 1450

GCT GCC AAT GAC TCA GCC CTG GTG GAG GTG CAG CCC GTG CTG GTC 4538
Ala Ala Asn Asp Ser Ala Leu Val Glu Val Glu Pro Val Leu Val
1455 1460 1465

ACC AGC ATC AAG GTC AAT GGC TCC CTT GGG CTG GAG CAG CAG CCC 4586
Thr Ser Ile Lys Val Asn Gly Ser Leu Gly Leu Glu Leu Glu Gin Pro
1470 1475 1480

TAC CTG TTC TCT GCT GTG GGC CGT GGG CGC CCC GCC AGC TAC CTG TGG 4634
Tyr Leu Phe Ser Ala Val Gly Arg Gly Arg Pro Ala Ser Tyr Leu Trp
1485 1490 1495 1500

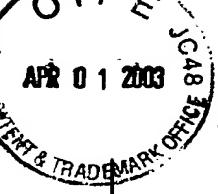
GAT CTG GGG GAC GGT GGG TGG CTC GAG GGT CCG GAG GTC ACC CAC GCT 4682
Asp Leu Gly Asp Gly Trp Leu Glu Gly Pro Glu Val Thr His Ala
1505 1510 1515

TAC AAC AGC ACA GGT GAC TTC ACC GTT AGG GTG GCC GGC TGG AAT GAG 4730
Tyr Asn Ser Thr Gly Asp Phe Thr Val Arg Val Ala Gly Trp Asn Glu
1520 1525 1530

GTG AGC CCC AGC GAG CCC TGG CTC AAT GTG ACC GTC AAG CGG CCC GTG 4778
Val Ser Arg Ser Glu Ala Trp Leu Asn Val Thr Val Lys Arg Arg Val
1535 1540 1545

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FIG. 1N



CGG CGG CTC GTC AAT GCA AGC CGC ACG GTG GTG CCC CTG AAT GGG
Arg Gly Leu Val Val Asn Ala Ser Arg Thr Val Val Pro Leu Asn Gly
1555 1560

AGC GTG AGC TTC AGC ACG TCG CTC GAG GCC GGC AGT GAT GTG CGC TAT
Ser Val Ser Phe Ser Thr Ser Leu Glu Ala Gly Ser Asp Val Arg Tyr
1565 1570

TCC TGG GTG CTC TGT GAC CGC TGC ACG CCC ATC CCT GGG GGT CCT ACC
Ser Trp Val Leu Cys Asp Arg Cys Thr Pro Ile Pro Gly Gly Pro Thr
1585 1590

ATC TCT TAC ACC TTC CGC TCC GTG GGC ACC TTC AAT ATC ATC GTC ACG
Ile Ser Tyr Thr Phe Arg Ser Val Gly Thr Phe Asn Ile Ile Val Thr
1600 1605

GCT GAG AAC GAG GTG GGC TCC GCC CAG GAC AGC ATC TTC GTC TAT GTC
Ala Glu Asn Glu Val Gly Ser Ala Gin Asp Ser Ile Phe Val Tyr Val
1615 1620

CTG CAG CTC ATA GAG GGG CTG CAG GTC GTG GGC GGT GCC CGC TAC TTC
Leu Gin Leu Ile Glu Gly Leu Gin Val Val Gly Gly Arg Tyr Phe
1630 1635

CCC ACC AAC CAC ACC GTA CAG CTC CAG GCC GTG GTT AGG GAT GGC ACC
Pro Thr Asn His Thr Val Gin Leu Gin Ala Val Val Arg Asp Gly Thr
1645 1650

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FIG. 10



AAC GTC TCC TAC AGC TGG ACT GCC TGG AGG GAC ACC AAC ATG CTC ACC GTG CTC GAG GCC GGC CCC GCC CTC
Asn Val Ser Tyr Ser Trp Thr Ala Trp Arg Asp Arg Gly Pro Ala Leu
1665 1670 1675

GCC GGC ACC GGC AAA GGC TTC TCG CTC ACC GTG CTC GAG GCC GGC ACC
Ala Gly Ser Gly Lys Gly Phe Ser Leu Thr Val Leu Gly Ser Ala Gly Thr
1680 1685

TAC CAT GTG CAG CTG CGG GCC ACC AAC ATG CTG GCC AGC GCC TGG GCC
Tyr His Val Gln Leu Arg Ala Thr Asn Met Leu Gly Ser Ala Trp Ala
1695 1700 1705

GAC TGC ACC ATG GAC TTC GTG GAG CCT GTG CGG TGG CTG ATG GTG GCC
Asp Cys Thr Met Asp Phe Val Glu Pro Val Gly Trp Leu Met Val Ala
1710 1715 1720

GCC TCC CCG AAC CCA GCT GCC GTC AAC ACA AGC GTC ACC CTC AGT GCC
Ala Ser Pro Asn Pro Ala Ala Val Asn Thr Ser Val Thr Leu Ser Ala
1725 1730 1735 1740

GAG CTG GCT GGT GGC AGT GGT GTC GTC GTC TAC ACT TGG TCC TTG GAG GAG
Glu Leu Ala Gly Gly Ser Gly Val Val Tyr Thr Trp Ser Leu Glu Glu
1745 1750 1755

GCC CTC AGC TGG GAG ACC TCC GAG CCA TTT ACC CAT AGC TTC CCC
Gly Leu Ser Trp Glu Thr Ser Glu Pro Phe Thr Thr His Ser Phe Pro
1760 1765 1770



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ACA CCC GGC CTG CAC TTG GTC ACC ATG ACG GCA GGG AAC CCG CTG GGC
Thr Pro Gly Leu His Leu Val Thr Met Thr Ala Gly Asn Pro Leu Gly
1775 1780 1785

TCA GCC AAC GCC ACC GTG GAA GTG GAT GTG CAG GTG CCT GTG AGT GGC
Ser Ala Asn Ala Thr Val Glu Val Asp Val Gin Val Pro Val Ser Gly
1790 1795 1800

CTC AGC ATC AGG GCC AGC GAG CCC GGA GGC AGC TTC GTG GCG GCC GGG
Leu Ser Ile Arg Ala Ser Glu Pro Gly Gly Ser Phe Val Ala Ala Gly
1805 1810 1815 1820

TCC TCT GTG CCC TTT TGG GGG CAG CTG GCC ACG GGC ACC AAT GTG AGC
Ser Ser Val Pro Phe Trp Gly Gin Leu Ala Thr Gly Thr Asn Val Ser
1825 1830 1835

TGG TGC TGG GCT GTG CCC GGC GGC AGC AAG CGT GGC CCT CAT GTC
Trp Cys Trp Ala Val Pro Gly Gly Ser Ser Lys Arg Gly Pro His Val
1840 1845 1850 1855

ACC ATG GTC TTC CCG GAT GCT GGC ACC TTC TCC ATC CGG CTC AAT GCC
Thr Met Val Phe Pro Asp Ala Gly Thr Phe Ser Ile Arg Leu Asn Ala
1855 1860 1865

TCC AAC GCA GTC AGC TGG GTC TCA GGC ACC TAC AAC CTC ACC GCG GAG
Ser Asn Ala Val Ser Trp Val Ser Ala Thr Tyr Asn Leu Thr Ala Glu
1870 1875 1880

FIG. 1Q

GAG CCC ATC GTG GGC CTC GTG CTG TGG GCC AGC AAG GTG GTG GCG
Glu Pro Ile Val Gly Leu Val Leu Trp Ala Ser Ser Lys Val Val Ala
1885 1890 1895 1890 1900

CCC CGG CAG CTC GTC CAT TTT CAG ATC CTC CTG GCT GCC GGC TCA GCT
Pro Gly Gin Leu Val His Phe Gin Ile Leu Leu Ala Ala Gly Ser Ala
1905 1910 1915

GTC ACC TTC CGC CTG CAG GTC GGC GGG AAC CCC GAG GTG CTC CCC
Val Thr Phe Arg Leu Gin Val Gly Gly Ala Asn Pro Glu Val Leu Pro
1920 1925 1930

GGG CCC CGT TTC TCC CAC AGC TTC CCC CGC GTC GGA GAC CAC GTG GTG
Gly Pro Arg Phe Ser His Ser Phe Pro Arg Val Gly Asp His Val Val
1935 1940 1945

AGC GTG CGG GGC AAA AAC CAC GTG AGC TGG GCC CAG GCG CAG GTG CGC
Ser Val Arg Gly Lys Asn His Val Ser Trp Ala Gin Ala Val Arg
1950 1955 1960

ATC GTG CTG GAG GCC GTG AGT CGG CTG CAG GTG CCC AAC TGC TGC
Ile Val Val Leu Glu Ala Val Ser Gly Leu Glu Val Pro Asn Cys Cys
1965 1970 1975 1980

GAG CCT CCC ATC GGC ACT GAG AGG AAC TTC ACA GCC CGC GTG
Glu Pro Gly Ile Ala Thr Gly Thr Glu Arg Asn Phe Thr Ala Arg Val
1985 1990 1995



Docket No.: GZ 2061.00
U.S. Serial No.: 09/830,506
Applicant: Oxana Braghimov-Beskrovnya, et al.
Title: Compositions and Methods for Treating Polycystic
Kidney Disease

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CAG CGC GGC TCT CGG GTC GCC TAC GCC TGG TAC TTC TCG TCG CAG AAG
Gln Arg Gly Ser Arg Val Ala Tyr Ala Trp Tyr Phe Ser Leu Gin Lys
2000 2005 2010

GTC CAG CGC GAC TCG CTG GTC ATC CTG TCG GCC CGC GAC GTC ACC TAC
Val Gin Gly Asp Ser Leu Val Ile Leu Ser Gly Arg Asp Val Thr Tyr
2015 2020 2025

ACG CCC GTG GCC GCG CTC TTG GAG ATC CAG GTG CGC GCC TTC AAC
Thr Pro Val Ala Gly Leu Leu Glu Ile Gin Val Arg Ala Phe Asn
2030 2035 2040

GCC CTG GCC AGT GAG AAC CGC ACG CTG GTG CTG GAG GTT CAG GAC GCC
Ala Leu Gly Ser Glu Asn Arg Thr Leu Val Leu Glu Val Gin Asp Ala
2045 2050 2055 2060

GTC CAG TAT GTG GCC CTC CAG AGC GGC CCC TGC TTC ACC AAC CGC TCG
Val Gin Tyr Val Ala Leu Gin Ser Gly Pro Cys Phe Thr Asn Arg Ser
2065 2070 2075

GCG CAG TTT GAG GCC ACC AGC CCC CGG CGT GTG CCC TAC
Ala Gin Phe Glu Ala Ala Thr Ser Pro Ser Pro Arg Arg Val Ala Tyr
2080 2085 2090

CAC TGG GAC TTT GGG GAT GGG TCG CCA GGG CAG GAC ACA GAT GAG CCC
His Trp Asp Phe Gly Asp Gly Ser Pro Gly Gin Asp Thr Asp Glu Pro
2095 2100 2105

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FIG. 1S



AGG GAG CAC TCC TAC CTG AGG CCT GGG GAC TAC CGC GTG CAG GTG
Arg Ala Glu His Ser Tyr Leu Arg Pro Glu Asp Tyr Arg Val Glu Val
2110 2115 2120

AAC GCC TCC AAC CTG GTG AGC TTC TTC GTG GCG CAG GCC ACG GTG ACC
Asn Ala Ser Asn Leu Val Ser Phe Phe Val Ala Glu Ala Thr Val Thr
2125 2130 2135 2140

GTC CAG GTG CTG GCC TGC CCG GAG CCG GAG GTG GAC GTG GTC CTC CCC
Val Glu Val Val Ala Cys Arg Glu Pro Glu Val Asp Val Val Leu Pro
2145 2150 2155

CTG CAG GTG CTG ATG CGG CGA TCA CAG CGC AAC TAC TTG GAG GCC CAC
Leu Glu Val Val Met Arg Arg Ser Glu Arg Asn Tyr Leu Glu Ala His
2160 2165 2170 2175

GTT GAC CTG CGC GAC TGC GTC ACC TAC CAG ACT GAG TAC CGC TGG GAG
Val Asp Leu Arg Asp Cys Val Thr Tyr Glu Thr Glu Tyr Arg Trp Glu
2180 2185 2190 2195

GTC TAT CGC ACC GCC AGC TGC CAG CGG CGG CCA GCG CGT GTG
Val Tyr Arg Thr Ala Ser Cys Glu Arg Pro Glu Arg Pro Ala Arg Val
2200

GCC CTC CCC CCC GTC GAC GTG ACC CGG CCT CGG CTC CGC CCC
Ala Leu Pro Glu Val Asp Val Ser Arg Pro Arg Leu Val Leu Pro Arg
2205 2210 2220



Docket No.: GZ 2061.00
U.S. Serial No.: 09/830,506
Applicant: Oxana Ibraghimov-Beskrovnya, et al.
Title: Compositions and Methods for Treating
Polycystic Kidney Disease

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CTG GCG CCT GTG GGG CAC TAC TGC TTT GTG TTC GTC GTC TCA TTT
Leu Ala Leu Pro Val Gly His Tyr Cys Phe Val Phe Val Val Ser Phe
2225 2230 2235

GGG GAC ACG CCA CTG ACA CAG AGC ATC CAG GCC AAT GTG ACG GTG GCC
Gly Asp Thr Pro Leu Thr Gln Ser Ile Gln Ala Asn Val Thr Val Ala
2240 2245

CCC GAG CGC CTG GTG CCC ATC ATT GAG GGT GGC TCA TAC CGC GTG TGG
Pro Glu Arg Leu Val Pro Ile Glu Gly Ser Tyr Arg Val Val Trp
2255 2260 2265

TCA GAC ACA CGG GAC CTG GTG CTG GAT GGG AGC GAG TCC TAC GAC CCC
Ser Asp Thr Arg Asp Leu Val Leu Asp Gly Ser Glu Ser Tyr Asp Pro
2270 2275 2280

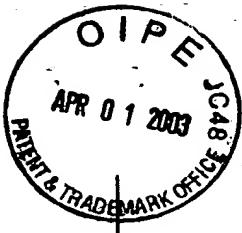
AAC CTG GAG GAC GGC GAC CAG ACG CCG CTC AGT TTC CAC TGG GCC TGT
Asn Leu Glu Asp Gly Asp Gln Thr Pro Leu Ser Phe His Trp Ala Cys
2285 2290 2295

GTG GCT TCG ACA CAG AGC GAG GCT GGC GGG TGT GCG CTG AAC TTT GGG
Val Ala Ser Thr Gln Arg Glu Ala Gly Gly Cys Ala Leu Asn Phe Gly
2305 2310 2315

CCC CGG CGG AGC AGC ACC ATT CCA CGG GAG CGG CTG GCG GCT
Pro Arg Gly Ser Ser Thr Val Thr Ile Pro Arg Glu Arg Leu Ala Ala
2325 2330

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FIG. 1U



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GGC GTG GAG TAC ACC TTC AGC CTG ACC GTG TGG AAG GCC CGC CGC AAG 7178
 Gly Val Glu Tyr Thr Phe Ser Leu Thr Val Trp Lys Ala Gly Arg Lys
 2340 2345

GAG GAC GCC ACC AAC CAG ACG GTG CTC ATC CGG AGT GGC CGG GTG CCC 7226
 Glu Glu Ala Thr Asn Gin Thr Val Leu Ile Arg Ser Gly Arg Val Pro
 2350 2355

ATT GTG TCC TTG GAG TGT GTG TCC TGC AAG GCA CAG GCC GTG TAC GAA 7274
 Ile Val Ser Leu Glu Cys Val Ser Cys Lys Ala Gln Ala Val Tyr Glu
 2360 2365

GTG AGC CGC AGC TCC TAC GTG TAC TTG GAG GCC CGC TGC CTC AAT TGC 7322
 Val Ser Arg Ser Tyr Val Tyr Leu Glu Gly Arg Cys Leu Asn Cys
 2370 2375

AGC AGC GGC TCC AAG CGA CGG CGG TGG GCT GCA CGT ACG TTC AGC AAC 7370
 Ser Ser Gly Ser Lys Arg Gly Arg Trp Ala Ala Arg Thr Phe Ser Asn
 2380 2385

AAG ACG CTG GTG CTG GAT GAG ACC ACA TCC ACG GGC AGT GCA GGC 7418
 Lys Thr Leu Val Leu Asp Glu Thr Thr Ser Thr Gly Ser Ala Gly
 2390 2395

ATG CGA CTG GTG CTG CGG CGG GTG CTC CGG GAC GGC GAG GCA TAC 7466
 Met Arg Leu Val Leu Arg Arg Gly Val Leu Arg Asp Gly Glu Gly Tyr
 2400 2405

FIG. 1V



ACC TTC ACG CTC ACG GTG CTG GGC CGC TCT GGC GAG GAG GGC TGC
 Thr Phe Thr Val Leu Gly Arg Ser Gly Glu Glu Gly Cys
 2445 2455 2460

GCC TCC ATC CGC CTG TCC CCC AAC CGC CGC CCG CTC GGG GGC TCT TGC
 Ala Ser Ile Arg Leu Ser Pro Asn Arg Pro Pro Leu Gly Ser Cys
 2465 2470 2475

CGC CTC TTC CCA CTG GGC GCT GTG CAC GGC CTC ACC ACC AAG GTG CAC
 Arg Leu Phe Pro Leu Gly Ala Val His Ala Leu Thr Lys Val His
 2480 2485 2490

TTC GAA TGC ACG GGC TGG CAT GAC CGC GAG GAT GCT GGC GCC CCG CTC
 Phe Glu Cys Thr Gly Trp His ASP Ala Glu ASP Ala Gly Ala Pro Leu
 2495 2500 2505

GTC TAC GCC CTG CTG CGG CGC TGT CGC CAG GGC CAC TGC GAG GAG
 Val Tyr Ala Leu Leu Arg Arg Cys Arg Gin Gly His Cys Glu Glu
 2510 2515 2520

TTC TGT GTC TAC AAG GGC AGC CTC TCC AGC TAC GGA GCC GTG CTG CCC
 Phe Cys Val Tyr Lys Gly Ser Ser Tyr Gly Ala Val Leu Pro
 2525 2530 2535 2540

CCG GGT TTC AGC CCA CAC TTC GAG GTC GGC CTC GCC GTG GTG CAG
 Pro Gly Phe Arg Pro His Phe Glu Val Gly Leu Ala Val Val Val Gin
 2545 2550 2555 2555

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FIG. 1W



GAC CAG CTC GGA GCC GCT GTG GTC GCC CTC AAC AGG TCT TTG GCC ATC
Asp Gin Leu Gly Ala Ala Val Val Ala Leu Asn Arg Ser Leu Ala Ile
2560 2565

ACC CTC CCA GAG CCC AAC GGC AGC GCA ACG GGG CTC ACA GTC TGG CTG
Thr Leu Pro Glu Pro Asn Gly Ser Ala Thr Gly Leu Thr Val Trp Leu
2575 2580

CAC GGG CTC ACC GCT AGT GTG CTC CCA GGG CTG CTG CAG GCC GAT
His Gly Leu Thr Ala Ser Val Leu Pro Gly Leu Leu Arg Gin Ala Asp
2590 2595

CCC CAG CAC GTC ATC GAG TAC TCG TCG GCC CTG GTC ACC GTG CTG AAC
Pro Gin His Val Ile Glu Tyr Ser Leu Ala Leu Val Thr Val Leu Asn
2605 2610

GAG TAC GAG CGG GCC CTG GAC GTG GCG GCA GAG CCC AAG CAC GAG CGG
Glu Tyr Glu Arg Ala Leu Asp Val Ala Ala Glu Pro Lys His Glu Arg
2625 2630

CAG CAC CGA GCC CAG ATA CGC AAG AAC ATC ACG GAG ACT CTG GTG TCC
Gln His Arg Ala Gln Ile Arg Lys Asn Ile Thr Glu Thr Leu Val Ser
2640 2645

CTG AGG GTC CAC ACT GTC GAT GAC CAG ATC GCT GCT GCG CTC
Leu Arg Val His Thr Val Asp Asp Ile Gln Gln Ile Ala Ala Ala Leu
2655 2660

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FIG. 1X



GCC CAG TGC ATG GGG CCC AGC AGG GAG CTC GTA TGC CGC TCG TGC CTG
 Ala Gin Cys Met Gly Pro Ser Arg Glu Leu Val Cys Arg Ser Cys Leu
 2670 2680

AAG CAG ACG CTG CAC AAG CTG GAG GCC ATG ATG CTC ATC CTG CAG GCA
 Lys Gin Thr Leu His Lys Leu Glu Ala Met Met Leu Ile Leu Gin Ala
 2685 2690

GAG ACC ACC GCG GGC ACC GTG ACG CCC ACC GCC ATC GGA GAC AGC ATC
 Glu Thr Thr Ala Gly Thr Val Thr Pro Thr Ala Ile Gly Asp Ser Ile
 2705 2710 2715

CTC AAC ACA GGA GAC CTC ATC CAC CTG GCC AGC TCG GAC GTG CGG
 Leu Asn Ile Thr Gly Asp Leu Ile His Leu Ala Ser Ser Asp Val Arg
 2720 2725 2730

GCA CCA CAG CCC TCA GAG CTG CGA GGC GAG TCA CCA TCT CGG ATG GTG
 Ala Pro Gin Pro Ser Glu Leu Gly Ala Glu Ser Pro Ser Arg Met Val
 2735 2740 2745

GCG TCC CAG GCC TAC AAC CTG ACC TCT GCC CTC ATG CGC ATC CTC ATG
 Ala Ser Gin Ala Tyr Asn Leu Thr Ser Ala Leu Met Arg Ile Leu Met
 2750 2755 2760

GGC TCC CCC GTC CTC AAC GAG GAC CCC CTG ACC CTC CGC CCC GAC GAG
 Arg Ser Arg Val Leu Asn Glu Glu Pro Leu Thr Leu Ala Gly Glu Glu
 2765 2770 2780

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FIG. 1Y



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ATC GTG GCC CAG GGC AAG CGC TCG GAC CCG CGG AGC CTG CTG TGC TAT
Ile Val Ala Gin Gly Lys Arg Ser Asp Pro Arg Ser Leu Leu Cys Tyr
2785 2790 2795

GGC GGC CCC CCA GGG CCT TGC CAC TTC TCC ATC CCC GAG GCT TTC
Gly Gly Ala Pro Gly Pro Gly Cys His Phe Ser Ile Pro Glu Ala Phe
2800 2805 2810

AGC GGG GCC CTG GCC AAC CTC AGT GAC GTG GTG CAG CTC ATC TTT CTG
Ser Gly Ala Leu Ala Asn Leu Ser Asp Val Val Gin Leu Ile Phe Leu
2815 2820 2825

GTC GAC TCC AAT CCC TTT CCC TTT GGC TAT ATC AGC AAC TAC ACC GTC
Val Asp Ser Asn Pro Phe Pro Phe Gly Tyr Ile Ser Asn Tyr Thr Val
2830 2835 2840

TCC ACC AAG GTG GCC TCG ATG GCA TTC CAG ACA CAG GCC GGC CAG
Ser Thr Lys Val Ala Ser Met Ala Phe Glu Thr Gin Ala Gly Ala Gin
2845 2850 2855 2860

ATC CCC ATC GAG CGG CTG GCC TCA GAG CGC GCC ATC ACC GTG AAG GTG
Ile Pro Ile Glu Arg Leu Ala Ser Glu Arg Ala Ile Thr Val Lys Val
2865 2870 2875

CCC AAC AAC TCG GAC TGG GCT CCC CGG CAC CCC AGC TCC GCC AAC
Pro Asn Asn Ser Asp Trp Ala Ala Arg Gly His Arg Ser Ser Ala Asn
2880 2885 2890

FIG. 1Z

TCC GCC AAC TCC GTT GTG GTC CAG CCC CAG CAC TAC CTG TCT GAG GAA CCT GAG CCC
Ser Ala Asn Ser Val Val Val Gin Pro Gin Ala Ser Val GIY Ala Val
2895 2900 2905

GTC ACC CTG GAC AGC AGC AAC CCT GCC GGG CTG CAT CTG CAG CTC
Val Thr Leu Asp Ser Ser Asn Pro Ala Ala GIY Leu His Leu Gin Leu
2910 2915 2920

AAC TAT ACG CTG CTG GAC GGC CAC TAC CTG TCT GAG GAA CCT GAG CCC
Asn Tyr Thr Leu Leu Asp GIY His Tyr Leu Ser GIU Glu Pro Glu Pro
2925 2930 2935 2940

TAC CTG GCA GTC TAC CTA CAC TCG GAG CCC CGG CCC AAT GAG CAC AAC
Tyr Leu Ala Val Tyr Leu His Ser GIU Pro Arg Pro Asn Glu His Asn
2945 2950 2955

TGC TCG GCT AGC AGG ATC CGC CCA GAG TCA CTC CAG GGT GCT GAC
Cys Ser Ala Ser Arg Arg Ile Arg Pro Glu Ser Leu Gin GIY Ala Asp
2960 2965 2970

CAC CGG CCC TAC ACC TTC ATT TCC CCC GGG AGC AGA GAC CCA GCG
His Arg Pro Tyr Thr Phe Phe Ile Ser Pro GIY Ser Arg Asp Pro Ala
2975 2980 2985

GCG ACT TAC CAT CTG AAC CTC TCC AGC CAC TTC CGG TGG TCG GCG CTC
GIY Ser Tyr His Leu Asn Leu Ser Ser His Phe Arg Trp Ser Ala Leu
2990 2995 3000

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FIG. 1AA



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CAG GTG TCC GTG GGC CTG TAC ACG TCC CTG TGC CAG TAC TTC AGC GAG
 Gln Val Ser Val Gly Leu Tyr Thr Ser Leu Cys Gin Tyr Phe Ser Glu
 3005 3010 3015 3020

GAG GAC ATG GTG TGG CGG ACA GAG GGG CTC CTC ACC CGC CAC CTC ACC GCC TTC GGC
 Glu Asp Met Val Trp Arg Thr Glu Gly Leu Pro Leu Glu Glu Thr
 3025 3030 3035

TCG CCC CGC CAG GCC GTC TGC CTC ACC CGC CAC CTC ACC GCC TTC GGC
 Ser Pro Arg Gln Ala Val Cys Leu Thr Arg His Leu Thr Ala Phe Gly
 3040 3045 3050

GCC AGC CTC TTC GTG CCC CCA AGC CAT GTC CGC TTT GTG TTT CCT GAG
 Ala Ser Leu Phe Val Pro Pro Ser His Val Arg Phe Val Pro Glu
 3055 3060 3065

CCG ACA GCG GAT GTA AAC TAC ATC GTC ATG CTG ACA TGT GCT GTG TGC
 Pro Thr Ala Asp Val Asn Tyr Ile Val Met Leu Thr Cys Ala Val Cys
 3070 3075 3080

CTG GTG ACC TAC ATG GTC ATG GCC GCC ATC CTG CAC AAG CTG GAC CAG
 Leu Val Thr Tyr Met Val Met Ala Ala Ile Leu His Lys Leu Asp Glu
 3085 3090 3095 3100

TTC GAT GCC ACC CGG CGC CGC ATC CCT TTC TGT GGG CAG CGG GGC
 Leu Asp Ala Ser Arg Gly Arg Ala Ile Pro Phe Cys Glu Gin Arg Gly
 3110 3115

FIG. 1AB

CGC TTC AAG TAC GAG ATC CTC GTC AAG ACA GGC TGG GGC CGG GGC TCA
Arg Phe Lys Tyr Glu Ile Leu Val Lys Thr Glu Trp Glu Arg Gly Ser
3120 3125

GGT ACC ACG GCC CAC GTG GGC ATC ATG CTC TAT GGG GTC GAC AGC CGG
Gly Thr Thr Ala His Val Glu Ile Met Leu Tyr Glu Val Asp Ser Arg
3130 3135

AGC GGC CAC CGG CAC CTG GAC GGC GAC AGA GGC TTC CAC CGC AAC AGC
Ser Gly His Arg His Leu Asp Glu Asp Arg Ala Phe His Arg Asn Ser
3150 3155

CTG GAC ATC TTC CGG ATC GCC ACC CCG CAC AGC CTG GGT AGC GTG TGG
Leu Asp Ile Phe Arg Ile Ala Thr Pro His Ser Leu Glu Ser Val Trp
3165 3170

AAG ATC CGA GTG TGG CAC GAC AAC AAA GGG CTC AGC CCT GCC TGG TTC
Lys Ile Arg Val Trp His Asp Asn Lys Glu Leu Ser Pro Ala Trp Phe
3185 3190

CTG CAG CAC GTC ATC GTC AGG GAC CTG CAG GCA CGC AGC GCC TCC
Leu Gin His Val Ile Val Arg Asp Leu Gin Thr Ala Arg Ser Ala Phe
3200 3205

TTC CTC GTC AAT GAC TGG CTT TCG GTG GAG GAC GCC AAC GGC GGC
Phe Leu Val Asn Asp Trp Leu Ser Val Glu Thr Glu Ala Asn Gly Gly
3215 3220

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FIG. 1AC



CTG GTC GAG AAG GAG GTC GTC GCG GCG GCG GAC GCA GCC CTT TTG CGC 9866
Leu Val Glu Lys Glu Val Leu Ala Ala Ser Asp Ala Ala Leu Leu Arg
3230 3235

TTC CGG CGC CTG CTG GCT GAG CTG CAG CGT GGC TTC TTT GAC AAG 9914
Phe Arg Arg Leu Leu Val Ala Glu Leu Glu Arg Gly Phe Phe Asp Lys
3245 3250

CAC ATC TGG CTC TCC ATA TGG GAC CGG CCG CCT CGT AGC CGT TTC ACT 9962
His Ile Trp Leu Ser Ile Trp Asp Arg Pro Pro Arg Ser Arg Phe Thr
3265 3270

CGC ATC CAG AGG GCC ACC TGC TGC GTT CTC CTC ATC TGC CTC TTC CTG 10010
Arg Ile Gin Arg Ala Thr Cys Cys Val Leu Leu Ile Cys Leu Phe Leu
3280 3285

GCC GCC AAC GCC GTG TGG TAC CGG GCT GTT GGC GAC TCT GCC TAC AGC 10058
Gly Ala Asn Ala Val Trp Tyr Gly Ala Val Gly Asp Ser Ala Tyr Ser
3295 3300

ACG GGG CAT GTG TCC AGG CTG AGC CCG CTG AGC GTC GAC ACA GTC GCT 10106
Thr Gly His Val Ser Arg Leu Ser Pro Leu Ser Val Asp Thr Val Ala
3310 3315

GTT GGC CTG CTG TCC AGC GTC GTT TAT CCC GTC TAC CTC GCC ATC 10154
Val Gly Leu Val Val Val Tyr Pro Val Tyr Leu Ala Ile
3325 3330



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CTT TTT CTC TTC CGG ATG TCC CCG AGC AAG GTG GCT GGG AGC CCG AGC 10202
 Leu Phe Leu Phe Arg Met Ser Arg Ser Lys Val Ala Gly Ser Pro Ser
 3345 3350 3355

CCC ACA CCT GCC GGG CAG CAG GTG CTG GAC ATC GAC AGC TGC CTC GAC 10250
 Pro Thr Pro Ala Gly Gin Val Leu Asp Ile Asp Ser Cys Leu Asp
 3360 3365 3370

TCG TCC GTG CTG GAC AGC TCC TTC CTC ACG TTC TCA GGC CTC CAC GCT 10298
 Ser Ser Val Leu Asp Ser Ser Phe Leu Thr Phe Ser Gly Leu His Ala
 3375 3380 3385

GAG GCC TTT GTT GGA CAG ATG AAG AGT GAC TTG TTT CTG GAT GAT TCT 10346
 Glu Ala Phe Val Gly Gin Met Lys Ser Asp Leu Phe Leu Asp Asp Ser
 3390 3395 3400

AAG AGT CTG GTG TGC TGG CCC TCC GGC GAG GGA ACG CTC AGT TGG CCG 10394
 Lys Ser Leu Val Val Cys Trp Pro Ser Gly Glu Gly Thr Leu Ser Trp Pro
 3405 3410 3415 3420

GAC CTG CTC AGT GAC CCG TCC ATT GTG GGT AGC AAT CTG CGG CAG CTG 10442
 Asp Leu Leu Ser Asp Pro Ser Ile Val Gly Ser Asn Leu Arg Gin Leu
 3425 3430 3435

GCA CGG CGC CAG GCG CCC CAT GGG CTG CGC CCA GAG GAC GGC TTC 10490
 Ala Arg Gly Gin Ala Gly His Gly Leu Gly Pro Glu Glu Asp Gly Phe
 3440 3445 3450

FIG. 1AE

TCC CTG GCC AGC CCC TAC TCG CCT GCC AAA TCC TTC TCA GCA TCA GAT 10538
Ser Leu Ala Ser Pro Tyr Ser Pro Ala Lys Ser Phe Ser Ala Ser Asp
3455 3460 3465

GAA GAC CTG ATC CAG CAG GTC CTT GCC GAG GTC GGG GTC AGC AGC CCA GCC 10586
Glu Asp Leu Ile Gin Gin Val Leu Ala Glu Glu Val Ser Ser Pro Ala
3470 3475 3480

CCT ACC CAA GAC ACC CAC ATG GAA ACG GAC CTG CTC AGC AGC CTG TCC 10634
Pro Thr Gin Asp Thr His Met Glu Thr Asp Leu Leu Ser Ser Leu Ser
3485 3490 3495 3500

AGC ACT CCT GGG GAG ACA GAG ACG CTG GCG CTG CAG AGG CTG GGG 10682
Ser Thr Pro Gly Glu Lys Thr Glu Thr Leu Ala Leu Gin Arg Leu Gly
3505 3510 3515

GAG CTG GGG CCA CCC AGC CCA GGC CTG AAC TGG GAA CAG CCC CAG GCA 10730
Glu Leu Gly Pro Pro Ser Pro Gly Leu Asn Trp Glu Gin Pro Gin Ala
3520 3525 3530

GCG AGG CTG TCC AGG ACA GGA CTG GTC GAG GGT CTG CGG AAG CGC CTG 10778
Ala Arg Leu Ser Arg Thr Gly Leu Val Glu Gly Leu Arg Lys Arg Leu
3535 3540 3545

CTG CCC CCC TGG TGT CCC TCC CTG GCC CAC GGC CTC AGC CTG CTC CTG 10826
Leu Pro Ala Trp Cys Ala Ser Leu Ala His Gly Leu Ser Leu Leu Leu
3550 3555 3560

FIG. 1 AF





GTG GCT GTG GCT GCT GTC TCA GGG TGG GTG GGT GCG AGC TTC CCC
Val Ala Val Ala Val Ser Gly Trp Val Gly Ala Ser Phe Pro
3570 3575 3580

CCG GGC GTG AGT GTT GCG TGG CTC CTC TCC AGC AGC GCC AGC TTC CTG
Pro Gly Val Ser Val Ala Trp Leu Leu Ser Ser Ala Ser Phe Leu
3585 3590 3595

GCC TCA TTC CTC GGC TGG GAG CCA CTG AAG GTC TTG CTG GAA GCC CTG
Ala Ser Phe Leu Gly Trp Glu Pro Leu Lys Val Leu Glu Ala Leu
3600 3605 3610

TAC TTC TCA CTG GTG GCC AAG CGG CTC CAC CCG GAT GAA GAT GAC ACC
Tyr Phe Ser Leu Val Ala Lys Arg Leu His Pro Asp Glu Asp Asp Thr
3615 3620 3625

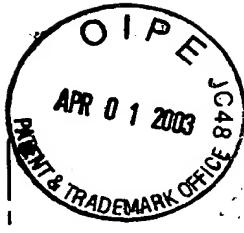
CTG GTA GAG AGC CCG GCT GTG ACG CCT GTG AGC GCA CGT GTG CCC CGC
Leu Val Glu Ser Pro Ala Val Thr Pro Val Ser Ala Arg Val Pro Arg
3630 3635 3640

CTA CGG CCA CCC CAC GGC TTT GCA CTC TTC CTG GCC AAG GAA GCA GCC
Val Arg Pro Pro His Gly Phe Ala Leu Phe Leu Ala Lys Glu Glu Ala
3645 3650 3655 3660

CGC AAG GTC AAG AGG CTA CAT GGC ATG CTG CGG AGC CTC CTG GTG TAC
Arg Lys Val Lys Arg Leu His Gly Met Leu Arg Ser Leu Leu Val Tyr
3665 3670 3675

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FIG. 1 AG



ATG CTT TTT CTG CTG GTG ACC CTC CTG CTG GCC AGC TAT GGG GAT GCC TCA
Met Leu Phe Leu Leu Val Thr Leu Leu Ala Ser Tyr Gly Asp Ala Ser
3685 3690

TGC CAT GGG CAC GCC TAC CGT CTC CAA AGC GCC ATC AAG CAG GAG CTG
Cys His Gly His Ala Tyr Arg Leu Glu Ser Ala Ile Lys Glu Glu Leu
3695 3700

CAC AGC CGG CCC TTC CTG GCC ATC ACG CGG TCT GAG GAG CTC TGG CCA
His Ser Arg Ala Phe Leu Ala Ile Thr Arg Ser Glu Glu Leu Trp Pro
3710 3715

TGG ATG GCC CAC GTG CTG CCC TAC GTC CAC GGG AAC CAG TCC AGC
Trp Met Ala His Val Leu Pro Tyr Val His Gly Asn Glu Ser Ser
3725 3730

CCA GAG CTG GGG CCC CCA CGG CTG CGG CAG GTG CGG CTG CAG GAA GCA
Pro Glu Leu Gly Pro Pro Arg Leu Arg Glu Val Arg Leu Glu Glu Ala
3745 3750

CTC TAC CCA GAC CCT CCC GGC CCC AGG GTC CAC ACG TGC TCG GCC GCA
Leu Tyr Pro Asp Pro Pro Gly Pro Arg Val His Thr Cys Ser Ala Ala
3760 3765

GGA GGC TTC ACC ACC GAT TAC GAC GTT GGC TGG GAG AGT CCT CAC
Gly Gly Phe Ser Thr Ser Asp Tyr Asp Val Gly Trp Glu Ser Pro His
3775 3780

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FIG. 1 AH



AAT GGC TCG GGG ACG TGG GCC TAT TCA GCG CCG GAT CTG CTG GGG GCA 11546
Asn Glu Ser Gly Thr Trp Ala Tyr Ser Ala Pro Asp Leu Glu Ala
3790 3795

TGG TCC TGG GGC TCC TGT GCC GTG TAT GAC AGC GGG GGC TAC GTG CAG 11594
Trp Ser Trp Gly Ser Cys Ala Val Tyr Asp Ser Gly Gly Tyr Val Glu
3805 3810 3815

GAG CTG GGC CTG AGC CTG GAG GAC CGC GAC CGG CTG CGC TTC CTG 11642
Glu Leu Gly Leu Ser Leu Glu Glu Ser Arg Asp Arg Leu Arg Phe Leu
3825 3830 3835

CAG CTG CAC AAC TGG CTG GAC AAC AGC CGC GCT GTG TTC CTG GAG 11690
Gln Leu His Asn Trp Leu Asp Asn Arg Ser Arg Ala Val Phe Leu Glu
3840 3845 3850

CTC ACG CGC TAC AGC CCG GCC GTG GGG CTG CAC GCC GTC ACG CTG 11738
Leu Thr Arg Tyr Ser Pro Ala Val Gly Leu His Ala Ala Val Thr Leu
3855 3860 3865

CGC CTC GAG TTC CCG GCG GCC GGC CTG GCC CCC CTC AGC GTC 11786
Arg Leu Glu Phe Pro Ala Ala Ala Gly Arg Ala Leu Ala Leu Ser Val
3870 3875 3880

CGC CCC TTT GCG CTG CCC CGC CTC AGC GGC CTC TCG CTG CCT CTG 11834
Arg Pro Phe Ala Leu Arg Arg Leu Ser Ala Gly Leu Ser Leu Pro Leu
3885 3890 3900

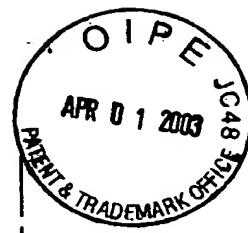
FIG. 1AI



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FIG. 1A J



GTC TTT GGC AAG ACA TTA TGC CGA GCT CTG CCA GAG CTC CTG GGG GTC
Val Phe Gly Lys Thr Leu Cys Arg Ala Leu Pro Glu Leu Gly Val
4015 4020 4025

ACC TTG GGC CCTG GTG CTC GGG GTC GCA TAC GCC CAG CTG GCC ATC
Thr Leu Gly Leu Val Val Leu Gly Val Ala Tyr Ala Glu Leu Ala Ile
4030 4035 4040

CTG CTC GTG TCT TCC TGT GTG GAC TCC CTC TGG AGC GTG GCC CAG GCC
Leu Leu Val Ser Ser Cys Val Asp Ser Leu Trp Ser Val Ala Glu Ala
4045 4050 4055 4060

CTG TTG GTG CCTG TGC CCT GGG ACT GGG CTC TCT ACC CTG TGT CCT GCC
Leu Leu Val Leu Cys Pro Gly Thr Gly Leu Ser Thr Leu Cys Pro Ala
4065 4070 4075

GAG TCC TGG CAC CTG TCA CCC CTG CTG TGT GTG GGG CTC TGG GCA CTG
Glu Ser Trp His Leu Ser Pro Leu Leu Cys Val Gly Leu Trp Ala Leu
4080 4085 4090

CGG CTG TGG GCC CCC CTA CGG CTG GGG GCT GTT ATT CTC CGC TGG CGC
Arg Leu Trp Gly Ala Leu Arg Leu Gly Ala Val Ile Leu Arg Trp Arg
4095 4100 4105

TAC CAC CCC TTG CCT GGA GAG CTG TAC CGG CCC TGG GAG CCC CAG
Tyr His Ala Leu Arg Gly Glu Leu Tyr Arg Pro Ala Trp Glu Pro Gin
4110 4115 4120



GAC TAC GAG ATG GTG GAG TTG TTC CTG CGC AGG CTG CGC CTC TGG ATG 12554
 ASP Tyr Glu Met Val Glu Leu Phe Leu Arg Arg Leu Arg Leu Trp Met 4130 4135 4140

GGC CTC AGC AAG GTC AAG GAG TTG CGC CAC AAA GTC CGC TTT GAA GGG 12602
 Glu Leu Ser Lys Val Lys Glu Phe Arg His Lys Val Arg Phe Glu Glu 4145 4150 4155

ATG GAG CCG CTG CCC TCT CGC TCC TCC AGG GGC TCC AAG GTA TCC CCG 12650
 Met Glu Pro Leu Pro Ser Arg Ser Ser Arg Glu Ser Lys Val Ser Pro 4160 4165 4170

GAT GTG CCC CCA CCC AGC GCT GGC TCC GAT GCC TCG CAC CCC TCC ACC 12698
 Asp Val Pro Pro Ser Ala Glu Ser Asp Ala Ser His Pro Ser Thr 4175 4180 4185

TCC TCC AGC CAG CTG GAT GGG CTG AGC GTG AGC CTC GGC CGG CTG GGG 12746
 Ser Ser Ser Glu Leu Asp Glu Leu Ser Val Ser Leu Glu Arg Leu Glu 4190 4195 4200

ACA AGG TGT GAG CCT GAG CCC TCC CTC CAA GCC GTG TTC GAG GCC 12794
 Thr Arg Cys Glu Pro Ser Arg Leu Glu Ala Val Phe Glu Ala 4205 4210 4215 4220

CTG CTC ACC CAG TTT GAC CGA CTC AAC CAG GCC ACA GAG GAC GTC TAC 12842
 Leu Leu Thr Glu Phe Asp Arg Leu Asn Glu Ala Thr Glu Asp Val Tyr 4225 4230 4235

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FIG. 1 AL



CAG CTG GAG CAG CAG CTG CAC AGC CTG CAA GGC CGC CGC AGG AGC AGC CCG
Gin Leu Glu Gin Gin Leu His Ser Leu Gin GIY Arg Arg Ser Ser Arg
4240 4245

GCG CCC GCC GGA TCT TCC CGT GGC CCA TCC CCC GCG CTC CGG CCA GCA
Ala Pro Ala GIY Ser Ser Arg GIY Pro Ser Pro GIY Leu Arg Pro Ala
4255 4260

CTG CCC AGC CGC CTT GCC CGG AGT CGG GGT GTG GAC CTG GCC ACT
Leu Pro Ser Arg Leu Ala Arg Ala Ser Arg GIY Val Asp Leu Ala Thr
4270 4275

GGC CCC AGC AGG ACA CCC CTT CGG GCC AAG AAC AAG GTC CAC CCC AGC
GIY Pro Ser Arg Thr Pro Leu Arg Ala Lys Asn Lys Val His Pro Ser
4285 4290

AGC ACT TAGTCCCTCT TCCTGGGGG GGTGGGGCGT GGAGTCGGAG TGGACACCGC
Ser Thr

TCAGTATTAC TTTCTGCCGC TGTCAAGGCC GAGGGCCAGG CAGAATGGCT GCACGGTAGGT 13150

TCCCCAGAGA GCAGGGCAGGG GCATCTGTCT GTCTGTGGGC TTCAGGACTT TAAAGAGGCT 13210

GTGTGCCAA CCAGGACCCA GGGTCCCCTC CCCAGCTCCC TTGGGAAGGA CACAGCAGTA 13270

TTGACGGTT TCTAGCCTCT GAGATGCTAA TTTATTTCCTCA CGAGTCCTCA GGTACAGCCG 13330



GCTGTCCCCG GCCCACCCC CTGGCAGAT GTCCCCCACT GCTAAGGCTG CTGGCTTCAG 13390
GGAGGGTTAG CCTGCACCGC CGCCACCCCTG CCCCTAAGTT ATTACCTCTC CAGTTCTTAC 13450
CGTACTCCCT GCACCCGTCTC ACTGTGTGTC TCGTGTCACT ATTATATATG GTGTTAAAT 13510
GTGTATATT TTGTATGTCA CTATTTTCAC TAGGGCTGAG GGGCCTGCCG CCAGAGCTGG 13570
CCTCCCCCAA CACCTGCTGC GCTTGGTAGG TGTGGTGGCG TTATGGCAGC CCGGCTGCTG 13630
CTTGGATGG AGCTTGGCCT TGGGCCGTG CTGGGGCAC AGCTGTCTGC CAGGCACT 13690
CATCACCCCA GAGGCCCTGT CATCCCTCCCT TGCCCCAGGC CAGGTAGCAA GAGGCCAGCG 13750
CCCAGGCCCTG CTGGCATCAG GTCTGGCAA GTAGCAGGAC TAGGCATGTC AGAGGACCCC 13810
AGGGTGGTTA GAGGAAAGA CTCCCTCTGG GGGCTGGCTC CCAGGGTGGA GGAAGGTGAC 13870
TGTGTGTG TGTGTGCC CGGGCCACG CGCGAGTGTG CTGTATGCC CAGGCAGCCT 13930
CAAGGCCCTC GGAGGCTGGCT GTGCCCTGGTT CTGTGTACCA CTTCTGTGGG CATGGCCGCT 13990
TCTAGAGGCTT CGACACCCCC CCAACCCCCG CACCAAGGAG ACAAAAGTCAA TAAAGAGCT 14050
GTCTGACTGC 14060



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Polyclonal antibodies to domain specific polycystin fusion proteins

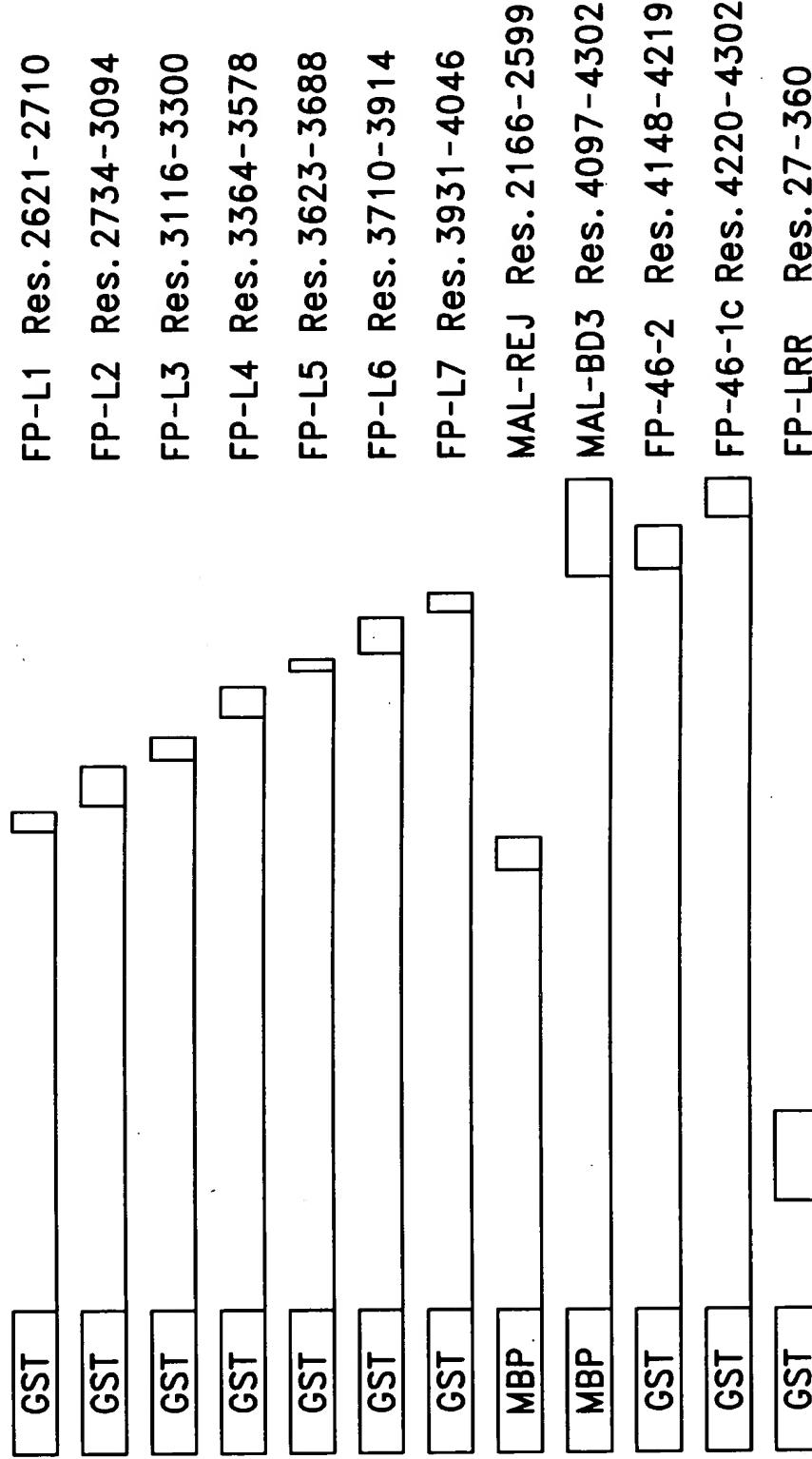
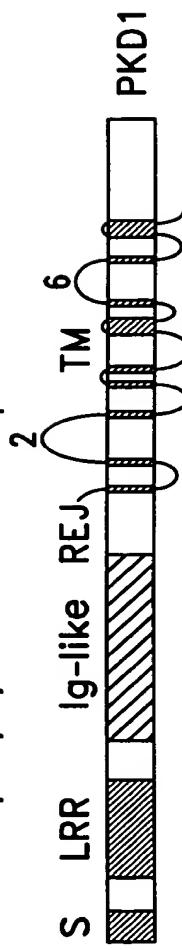
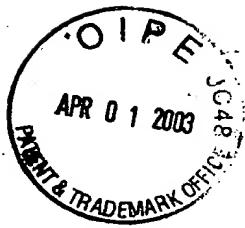


FIG. 2



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anti-LRR

anti-L2

anti-BD3

S LRR

Ig-like

REJ

TM



FLC13



HTM3



Nhe delta

FIG. 3A

FIG. 3B

200—
106—
69—
43—
28—
18—
control Nhe delta HTM3

170 kD

130 kD



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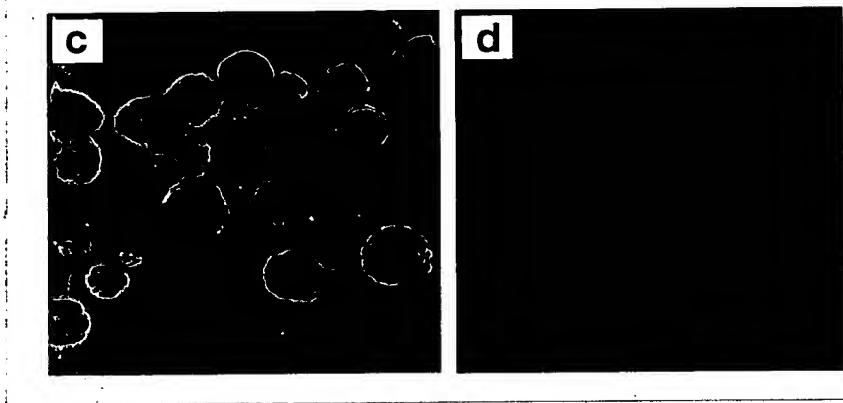
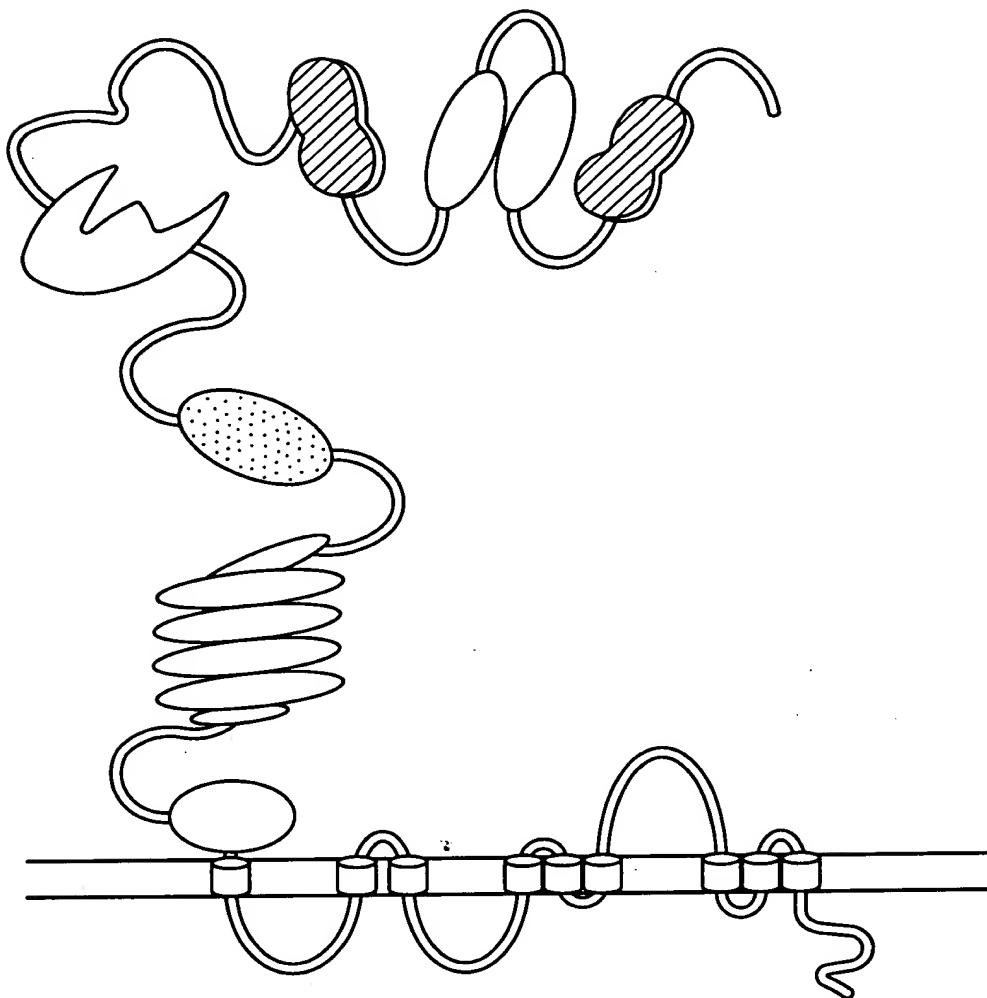


FIG. 3C FIG. 3D



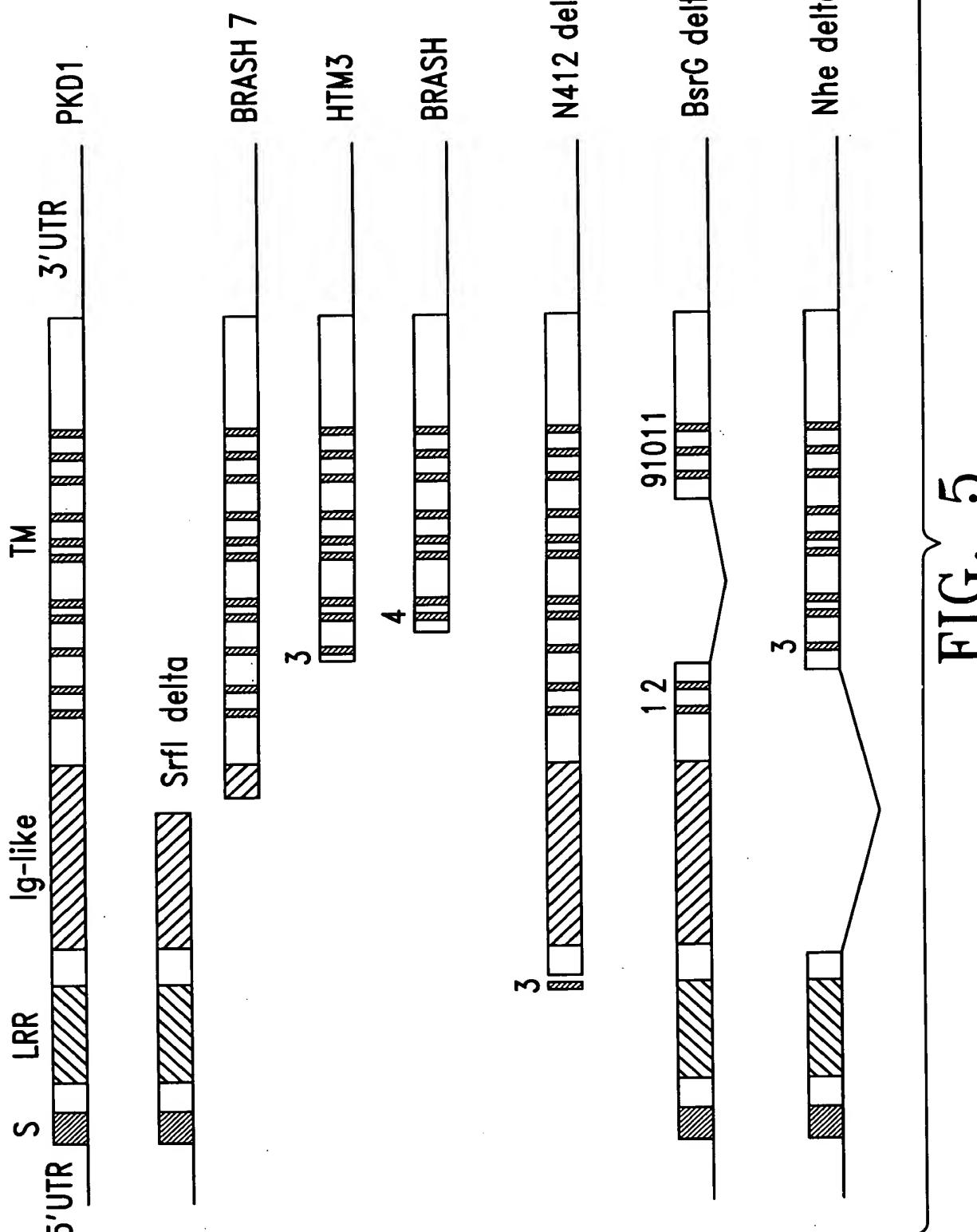
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- N - amino flanking region
- C - carboxy flanking region
- LRR - leucine - rich repeats
- Ig - like domains
- C - type lectin domain
- REJ - domain with homology to the receptor for egg jelly
- LDL - like domain
- TM - putative transmembrane region

FIG. 4

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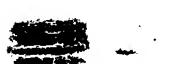
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200 -



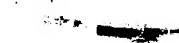
106 -



69 -



43 -



28 -



18 -



Sf21
Nhe[△]
HTM3

FIG. 6

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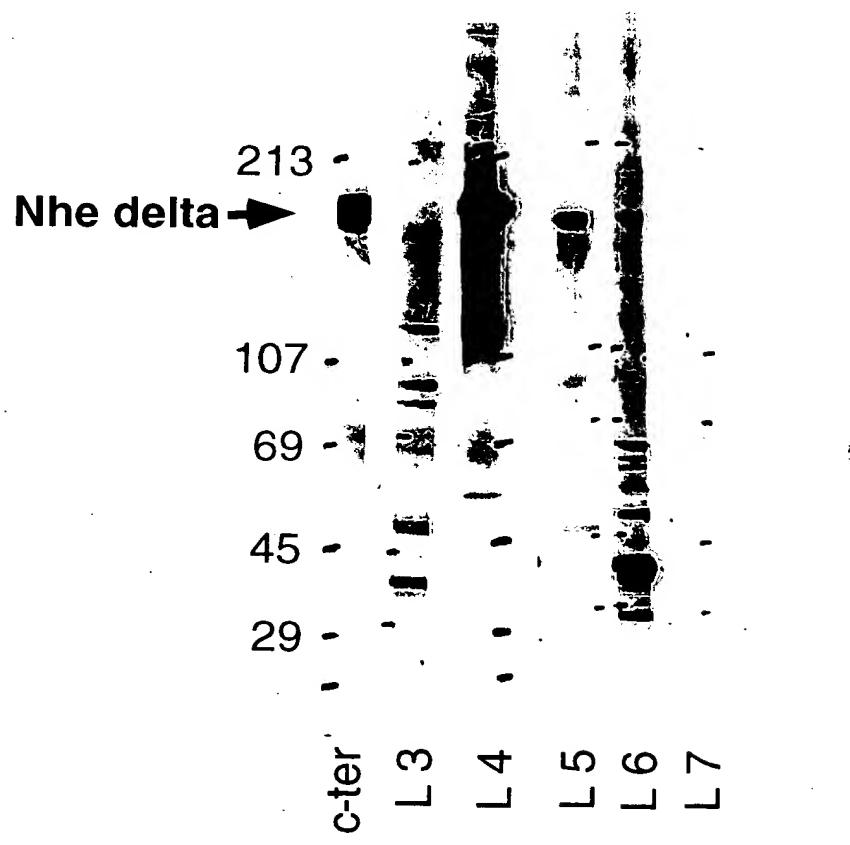
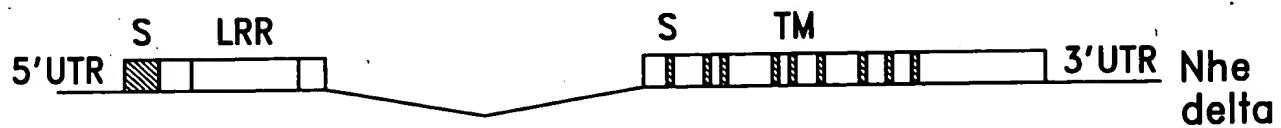


FIG. 7



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216 -

110 -

71 -

43 -

28 -

18 -

**vector
HTM3**

FIG. 8



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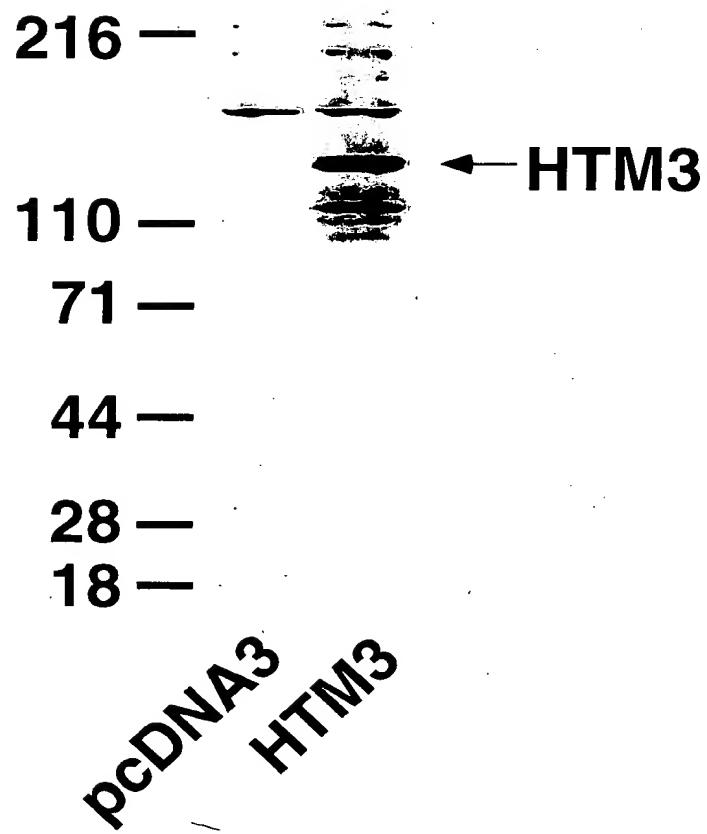


FIG. 9



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kidney liver

→ *in vitro*
translated

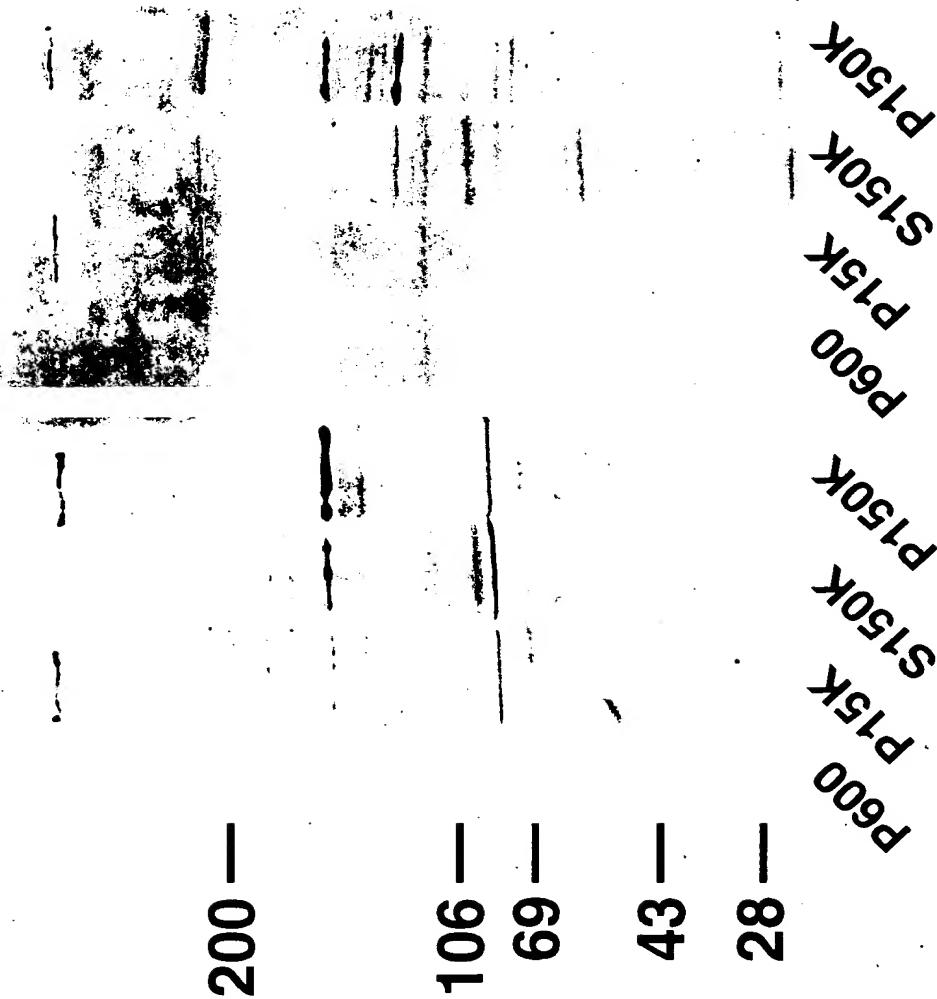


FIG. 10A



PKD1 Na^+/K^+ ATPase PKD1

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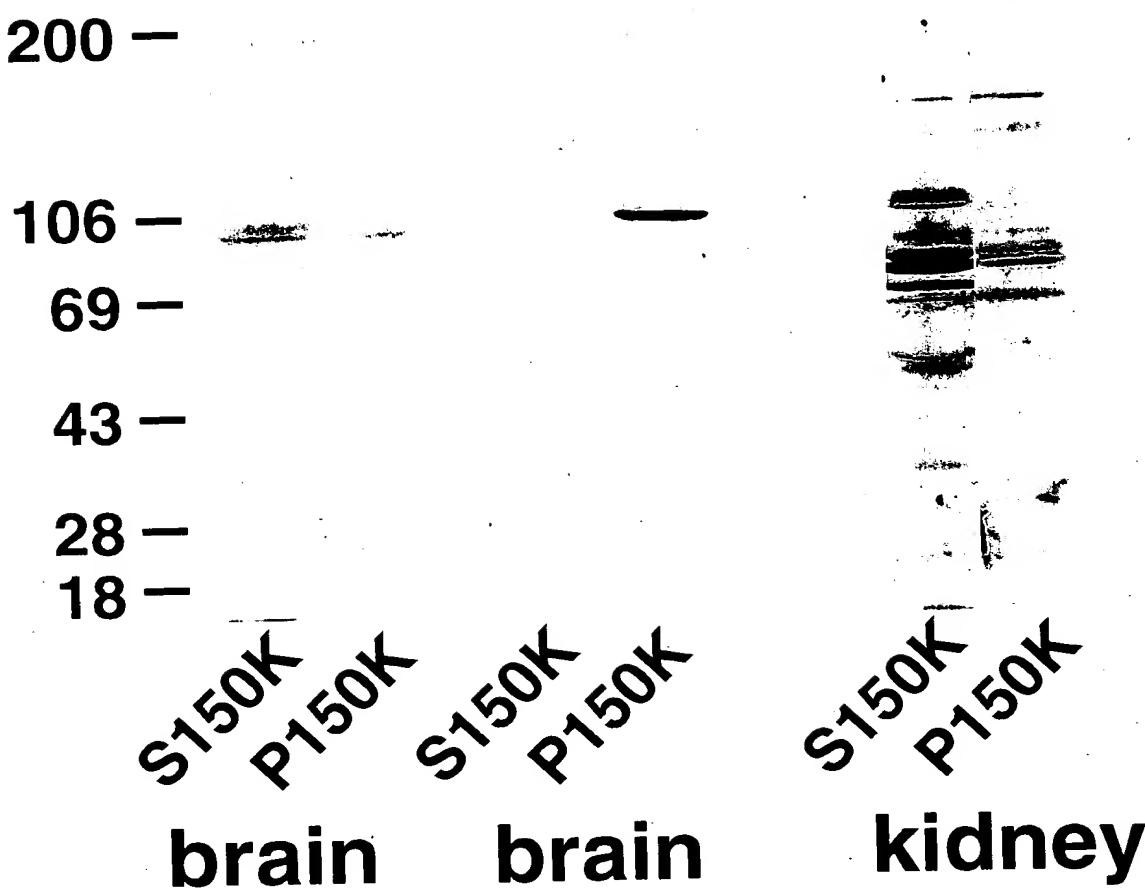


FIG. 10B



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FIG. 10C

P150K
S150K KCl
P150K
S150K KCl
P150K
S150K KCl
P150K
S150K KCl

P150K
S150K KCl
P150K
S150K KCl
P150K
S150K KCl
P150K
S150K KCl

47-

73-

111-

200-

brain
kidney

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199 -

106 -

69 -

43 -

28 -

28 -
19 -
Fkm 293 U81 U373 H75C T84 MDCK cos1

FIG. 10D



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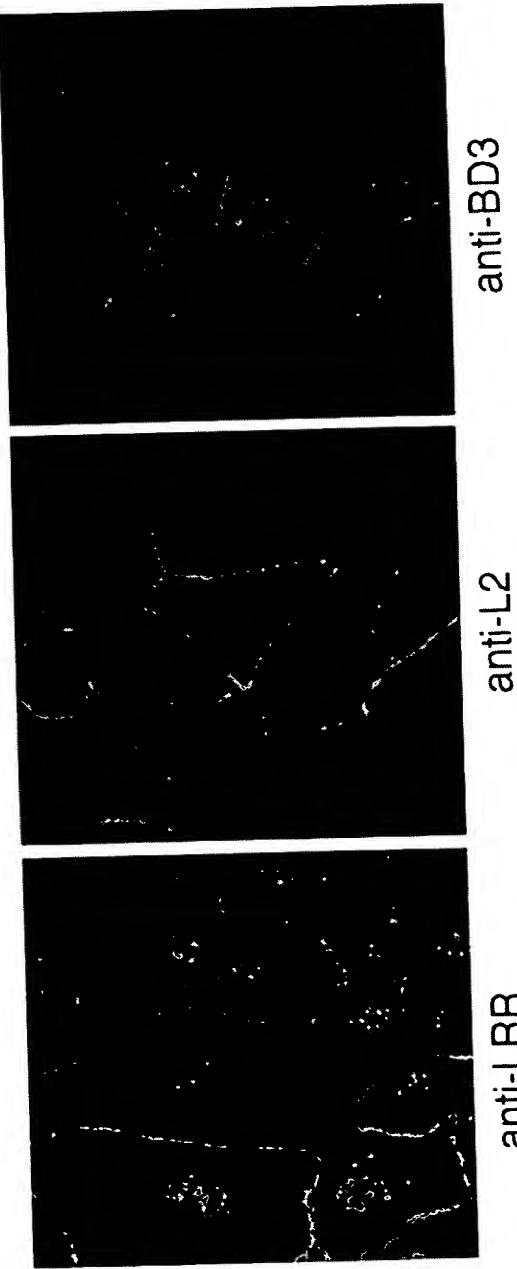


FIG. 11



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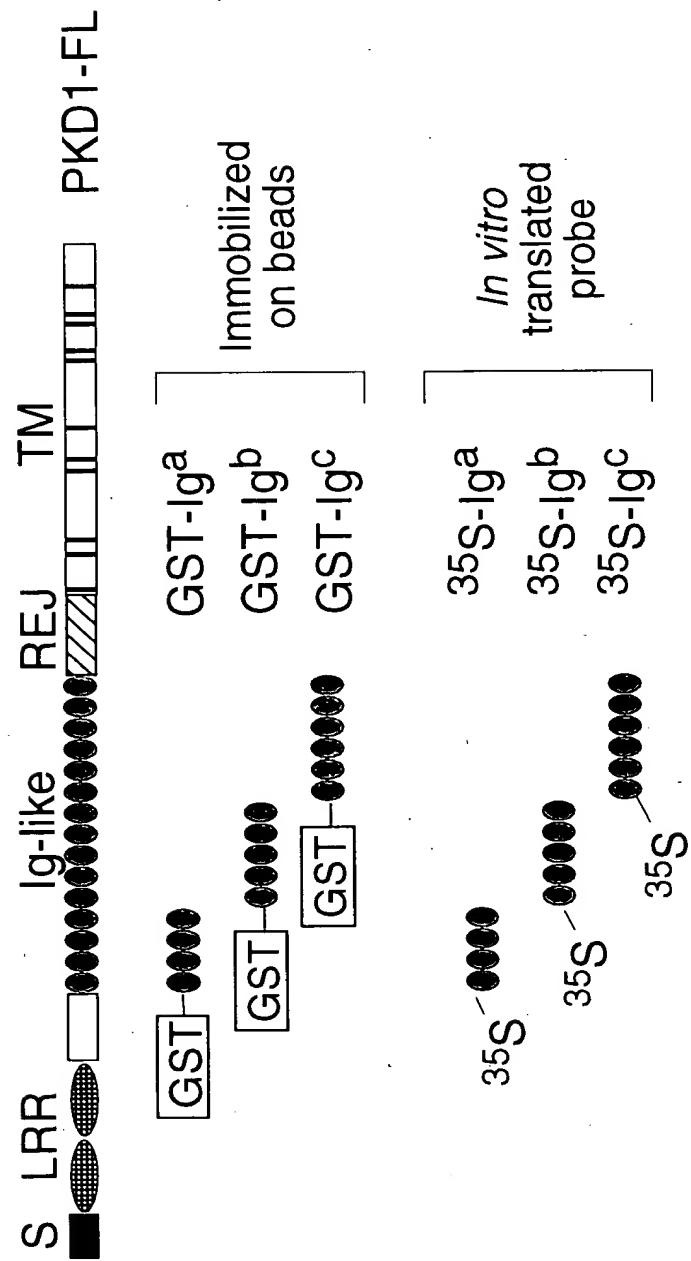


FIG. 12A



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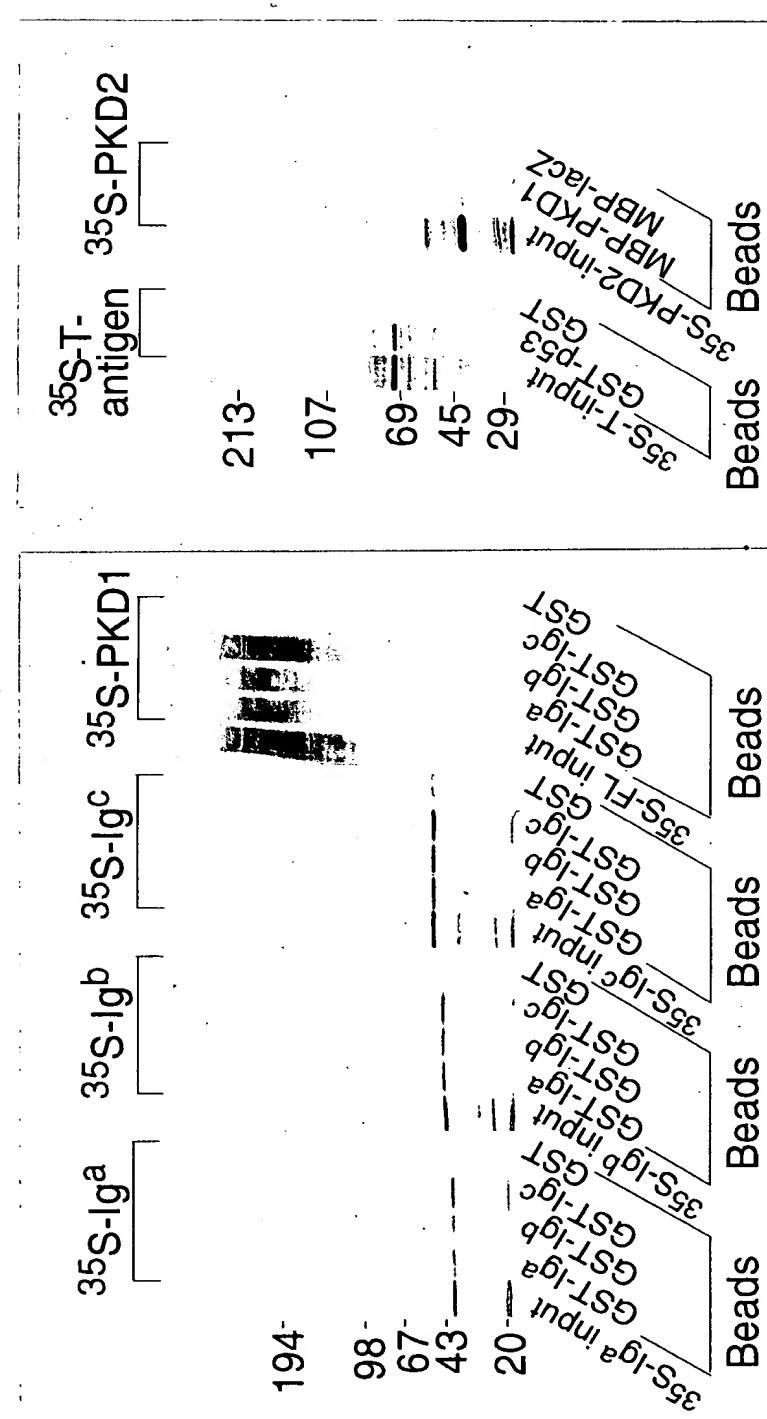


FIG. 12B
 FIG. 12C

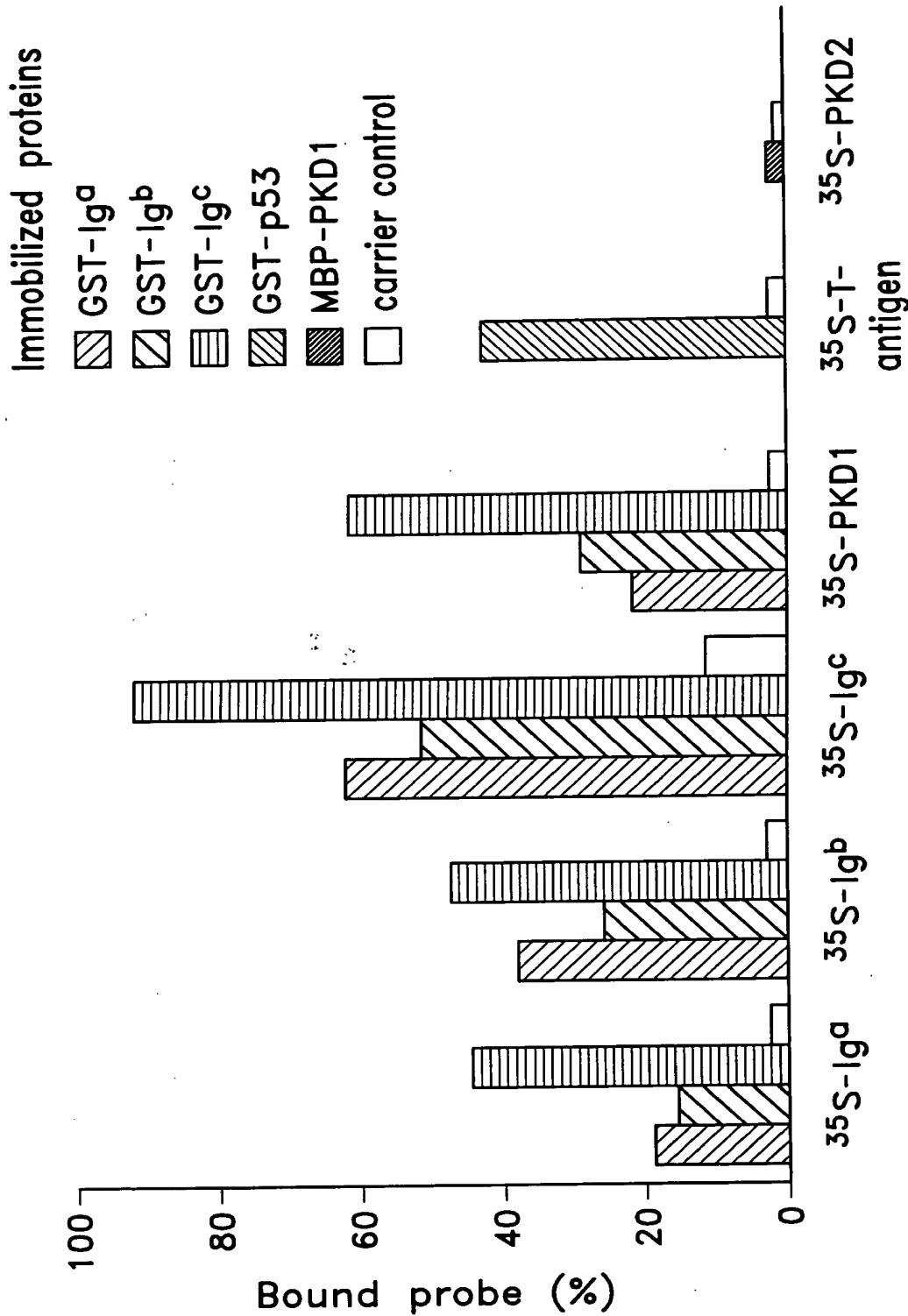


FIG. 13



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media alone media + GST media + GST-Igabc



FIG. 14A

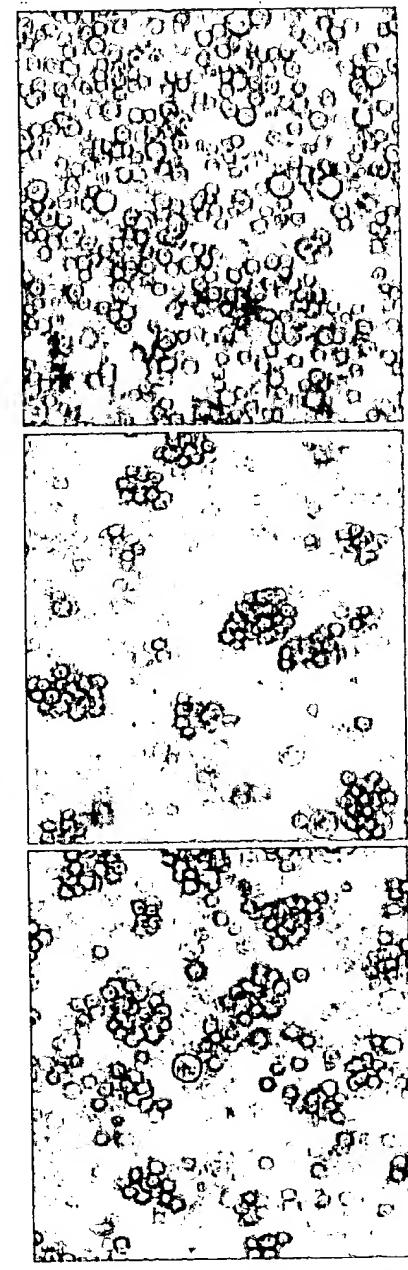


FIG. 14B